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AIR CONDITIONING AND REFRIGERATION News

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INSIDE DOPE

by GEORGE F. TAUBENECK

Story of the Week
Gifford on Foreign Trade
Phoney Statistics Again
Platform for Business

Story of the Week

A swing music fan called an appliance store, which carried popular recordings as a sideline, to order a new hit tune. By mistake, she was connected with a refrigeration service firm. The following conversation ensued:

"Do you have 'Two Tulips and Five Red Roses'?"

"No," replied the kerrickter who answered the phone at the service shop, "but we do have two tomcats and five kittens."

"Is that a record?" asked the swing fan, dubiously.

"The boys around here think it is."

Gifford on Foreign Trade

Since Germany and Japan & Co. cried "Uncle!" the experts have been telling us that both our prosperity and the peace of the world hinge on our full participation in international trade.

If you are one of those domestic-minded businessmen who are unimpressed with this view, ponder for a bit the thinking of a gentleman who ought to know about such things.

He is a man who was "pushed" into foreign work 35 years ago, who has covered most of the world many times since then, and has built factories in Germany and France. To him, foreign trade is "the most fascinating game in the world."

He is R. W. Gifford, vice president and assistant general manager of Norge Division, Borg-Warner Corp., and chairman of the board of Borg-Warner International Corp.

He'll tell you in just 10 words why he considers foreign trade important to this country: Because "all wars are basically economic" and because "we actually need the business." Anent the first point, Mr. Gifford reasons like this:

"Some of our long-range economists who have gone back several hundred years seem to be able to prove this, and based on numerous factors can foretell far in advance about when each war will take place. Since we have apparently abandoned our policy of isolation, we must be in a position to sit in the game and play our own cards correctly."

In support of the argument that we need the business, he holds that we have become highly industrialized and can produce far more than we can use. On this point, he bluntly observes that "to secure our share of this business will require intelligence in many departments in Washington and that, too, may be more than we can hope for.

"It will also require intelligence on the part of American business and that will not be so easy either," he continues. "It will not be easy because we are primarily a nation of domestic-minded businessmen. That is no reflection on the American businessman, as in most cases he has had his time fully occupied with home markets and home problems.

"It does mean that if our national prosperity needs foreign trade to remain prosperous, then you must learn the rules and fight to see that men in Washington also learn them. That may be your largest problem, as it will be impossible to separate the economic and political problems for a long time to come."

And Mr. Gifford has plenty to say about "the Washington situation." He recalls that ever since the exodus of President Hoover, anything connected with foreign commerce has been "in the doghouse."

"Our Department of Foreign Com-

(Concluded on Page 5, Column 1)

Heating, Ventilating Exposition Opens In Cleveland Jan. 27

CLEVELAND—Nearly 400 exhibitors will display the latest developments in the heating, air conditioning, and allied fields at the seventh International Heating and Ventilating Exposition to be held Jan. 27 through 31 in the Lakeside Hall of Cleveland's Public Auditorium.

The first held since 1940, the exposition is sponsored by the American Society of Heating & Ventilating Engineers, which will hold its fifty-third annual meeting at the Statler hotel concurrently with the exposition.

The National Warm Air Heating and Air Conditioning Association has also scheduled its thirty-third annual convention for the show week at the Hotel Cleveland, to be held on Jan. 29 and 30.

The exposition is described as comprising "a display of every kind of equipment required to improve

(Concluded on Back Page, Column 1)

Output of Appliances Jumped In October

WASHINGTON, D. C.—Increased production of consumer durable goods in October was noted in the November report of the Civilian Production Administration released here by CPA Administrator John D. Small.

A total of 280,000 mechanical refrigerators were produced in October, as compared with 239,000 in September, the report showed. This is still short of the 309,000 monthly average produced in 1940-41.

Washing machines, electric ranges, vacuum cleaners, and radios were also rolling out of the factories in increasing quantities. Washers and vacuum cleaners jumped 68 and 64% respectively.

Here is the score on these appliances:

	Oct.	Sept.	Prewar monthly average, 1940-41
Washing machines ...	265,000	212,000	158,000
Electric ranges	72,000	61,000	47,000
Vacuum cleaners	266,000	240,000	156,000
Radios	1,800,000	1,500,000	1,100,000
Electric irons		697,000	380,000

No electric iron figures for October were given in the report.

In a Bureau of Census report on various types of cooking appliances, the September and October comparisons on electric ranges came out this way:

Type	Production	Shipments Number	Value	Month End Factory Stocks
Apartment type				
Sept.	9,269	8,946	$ 514,168	366
Oct.	12,579	12,658	731,390	287
Standard type				
Sept.	51,461	52,233	5,679,478	5,916
Oct.	63,490	62,324	6,657,582	9,082

Vets Demand Conditioning In Arizona Hospital

PHOENIX, Ariz. — Despite the wave of protests which followed the announcement that the Veterans Hospital to be constructed here will not be completely air conditioned, Veterans Administrator Gen. Omar Bradley refused to reconsider his decision.

Present plans call for the air conditioning of only the operating facilities and the recovery and allergy rooms of the hospital.

Among the groups fighting the plan are: Luke-Greenway Post, American Legion; Phoenix Squadron of the Air Force Association; and the Arizona Medical Association.

The American Legion statement

(Concluded on Page 4, Column 5)

New Prices on Refrigerators, Washer Lines

DETROIT — More price increases were recorded on household electric refrigerators last week, along with the information on increases in two makes of automatic washers.

The new prices on Frigidaire household electric refrigerators have been established as follows:

Model No.	Old Price	New Price
MI-7	$179.25	$199.75
DI-7	198.00	220.75
DPI-7	224.00	248.75
DI-9	249.25	277.75
CDM-7	286.25	319.75
CPDM-7 ...	312.50	348.75
CPDM-9 ...	351.25	390.75

New retail refrigerator prices announced by Philco Corp. included raises of varying degrees on all models except the 622 "leader" model. The new prices are:

Model	Zone No. 1	Zone No. 2	Zone No. 3
622	$174.25	$176.25	$179.25
721	214.50	216.50	219.50
731	229.50	231.50	234.50
741	262.50	264.50	267.50
931	271.50	274.50	277.50
750	274.50	276.50	279.50
751	294.50	296.50	299.50
752	314.00	316.50	319.50
950	319.00	322.00	325.00
951	353.50	356.50	359.50

Model	Zone No. 4	Zone No. 5
622	$182.25	$185.25
721	222.50	225.50
731	237.50	239.95
741	269.95	273.50
931	279.95	284.50
750	282.50	285.50
751	302.50	305.50
752	322.50	325.50
950	328.00	332.00
951	362.50	366.50

Crosley Corp. last week raised prices on the two household refrigerators it is now delivering. The 7-cu. ft. model is up about 12%, the 9 cu. ft. box, 10%, as shown here:

Model No.	Old Price	New Price
SE-747	$222.50	$249.95
SE-947	263.95	289.95

Suggested retail installed prices on the Bendix automatic washer have been increased in the following manner:

Model	Old Price	New Price
Standard	$192.25	$219.50
Deluxe	218.25	239.50

A 7% retail price increase for the "Launderall," automatic washer manufactured by the F. L. Jacobs Co. here, became effective Nov. 25, the company announced. The new Zone 1 retail price is $299.95.

In a statement on price policies last week, General Electric's president Charles E. Wilson pointed out that the company has not been making "across the board" price increases, but is studying each of the company's 200,000 products separately "in an attempt to restore something like the normal balance between costs and selling prices."

Mr. Wilson said that in the home appliance field, the total price increases have averaged less than 10% and that retail prices of several products which are being produced in substantial volume have been raised less than 2%.

Among price increases announced by G.E. are: refrigerators, 12½%; electric ranges, 11%; washers, 30 to 35%; dishwashers, 11 to 17%; garbage "Disposall," 25%; flat plate ironer, 60%; irons, less than 1%.

Airtemp Employes Return Following 22-Day Strike

DAYTON, Ohio—A 22-day strike of employes at the Airtemp Division of Chrysler Corp. here ended last week, when members of the union voted to return to their jobs. Basis of agreement centered around job classification, according to union officials.

'Freon' Rail Shipment Possible, Says Kinetic

WILMINGTON, Del.—Rail shipments of "Freon" refrigerant can apparently be continued despite the freight embargo. Officials of Kinetic Chemicals, Inc., made the following statement Dec. 5:

"Can continue to ship as far as possible 'Freon-12' used for service in the food industry comprising manufacturing and distribution of foodstuffs.

"If the trade will offer empty cylinders to the rail lines marking the bill of lading as follows: 'This cylinder is used for containing a chemical employed for sanitation by food processors and distributors,' the rail lines will accept them."

CPA Extends Pig Iron Certification Plan

WASHINGTON, D. C.—The certification plan under which foundries currently receive preference in purchasing pig iron to be used for housing products and for railroad brakeshoes has been extended through the first quarter of 1947, the CPA declared Nov. 29.

This continuation of certification authority was provided in an amended Direction 13 to the steel order, M-21.

Under this plan, foundries which have orders for railroad brakeshoes or for any of the housing products listed in the direction may obtain preference by certifying to this effect in applying to their suppliers for pig iron to be shipped in the first three months of 1947.

Leaders Ask Congress Probe Iron Supplies

CHICAGO—A Congressional committee to investigate the distribution of pig iron and steel, particularly to determine why the regulations aimed at promoting veterans' housing have failed in their objective while tending to cripple the refrigeration industry, is being recommended by leaders of the refrigeration industry, according to the Refrigeration Equipment Manufacturers Association here.

Last week H. R. Spoehrer, R.E.M.A. president, revealed that this group and other associations and factors in the industry had begun a drive to acquaint members of Congress with the plight of the industry.

"The refrigeration industry is heartily in favor of the objectives of the program to provide new living quarters for veterans," explained one industry figure, "but when these objectives are not being attained, and when, at the same time, vital materials are being taken from manufacturers of refrigeration equipment and other industries, it is time for the entire situation to be examined by Congress."

Carrier Appoints Four New District Managers

SYRACUSE, N. Y.—Appointment of new district managers in the distributor-dealer sales division of Carrier Corp. have been announced by John A. Gazelle, manager of distributor-dealer sales.

George T. Long has been made

(Concluded on Page 4, Column 4)

Plants Strive To Stay Open 'Long as Possible'

Hope For Break In Strike; Embargo Could Hit Many Operations Within Week

DETROIT — The nationwide embargo on railroad freight shipments, going into effect Dec. 6 as a result of the coal strike, will probably close most plants in the refrigeration, air conditioning, and major appliance fields within a week to 10 days.

Most plants in these fields were continuing to operate in the hope that the strike might be settled over the weekend, in which case they probably could keep operating on some scale without a break.

The situation seems to be this in most of the major plants: they have enough of a fuel supply to keep operating for periods of from a week to a month, but between the diminishing coal supplies and the freight embargo they feel that their supply lines will soon dry up.

R. W. Gifford, vice president and general manager, Norge Division of Borg-Warner, put this feeling into words with the following statement:

"As far as our own coal supply is concerned we are in fair shape. The thing that is worrying us the most is the effect of the freight embargo on our shipment of finished products and the receipt of materials and parts from suppliers."

Kelvinator Division of Nash-Kelvinator stated that it was planning "to keep operating through another week at least, even if the strike continues."

Most of the industry's "complete unit" products (household and commercial refrigerators, air conditioning equipment, and appliances) are shipped by rail (probably 70% or better). However, some observers believe that if a number of plants are forced to close, there will be plenty of truck facilities available to ship the finished products of such plants as may continue to operate.

Manufacturers of refrigeration parts and components may have a little better going for a while, if they can get enough fuel to operate their own plants. Most of the shipping to and from such plants is by truck.

Said an executive of one such firm, which manufactures refrigeration and air conditioning and heating controls:

"We should shut down Saturday (Dec. 7) to give ourselves a proper margin of safety on our fuel supplies, but we scraped around and got a little more and will operate up to the very last moment.

"We feel we must do this to give every possible help to the manufac-

(Concluded on Back Page, Column 5)

42nd ASRE Meeting Will Open Dec. 16

NEW YORK CITY—Five technical sessions, including a symposium on refrigerated transport, have been scheduled for the forty-second annual meeting of the American Society of Refrigerating Engineers to be held Dec. 16 to 18 at the Pennsylvania Hotel here. The society expects the largest turnout in history.

In addition to the technical sessions, several entertainment features have been programmed. A welcome luncheon will be held Monday, Dec. 16, featuring Victor Von Hagen, noted author and naturalist. An entertainment in honor of new members has been arranged for Monday evening, and on Tuesday evening the annual dinner-dance will be held. For the ladies there will be a luncheon, bridge party, and a trip through the Good Housekeeping

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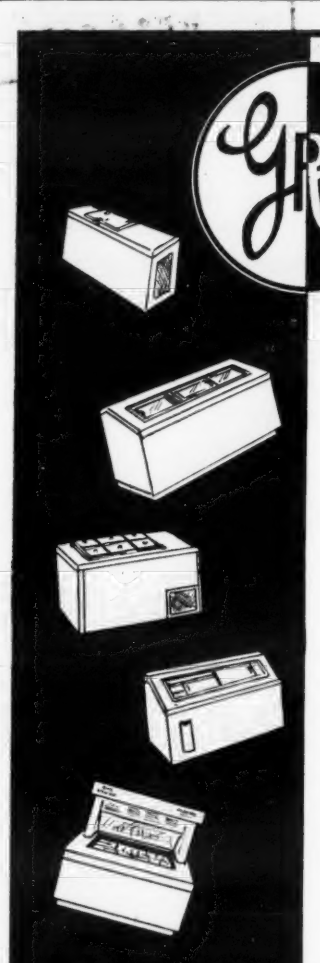

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Refrigerated Locker Units Rise 173% In 2 Years In New England

BOSTON — An increase of 173% in two years in the number of refrigerated locker units available to New Englanders was revealed by a survey of freezer locker plants in the region.

The survey was conducted by the New England Council's committee on agriculture and forestry in cooperation with the extension services of the state colleges and universities and the country agricultural agents.

The number of freezer plants and individual lockers located in New England on Sept. 1, by states, was disclosed as follows: Vermont, 43 plants, 14,744 lockers; Massachusetts, 27 plants, 13,092 lockers; Connecticut, 51 plants, 12,000 lockers; Maine, eight plants, 4,140 lockers; New Hampshire, 23 plants, 9,100 lockers; and Rhode Island, five plants, 1,800 lockers.

New Martin Transports To Get $2 Million In Air Conditioning Equipment

BABYLON, Long Island, N. Y.—Stratos Corp., an affiliate of Fairchild Engine & Airplane Corp., has been awarded a $2,000,000 contract by the Glenn L. Martin Co. of Baltimore for the construction and installation of cabin pressurizing and air conditioning equipment for the new Martin 3-0-3 transport airplane.

The equipment will be installed in 175 of the twin-engine passenger planes, Paul H. Portteus said. The contract is the largest ever written covering air conditioning of commercial airplanes, it is claimed.

With castings made of lightweight magnesium alloys, the entire air conditioning system weighs 175 lbs. and operates automatically with settings like those of a household furnace thermostat. It provides sea-level atmospheric pressure in the cabin of the 40-passenger airliner at altitudes up to 10,000 ft. At higher altitudes up to 24,000 ft. it maintains pressure equivalent to 8,000 ft. Temperatures are maintained automatically, it is said.

Pressurized cabins will allow the 3-0-3 to cross high mountain ranges with complete comfort to passengers, says the company, and many unpleasant symptoms formerly experienced by airline travelers, such as pain or numbness in the ears, and airsickness, will be minimized.

3 Incorporate Southwestern Refrigeration Co. at $14,000

DALLAS, Tex. — Jack Arnold Stroud, Helen Rose Stroud, and Mrs. D. C. May have incorporated the Southwestern Refrigeration Co., Inc., to operate a retail business here with $14,000 authorized capital stock.

Household Boxes, Washers, Cabinets, Are Approved For Export to England

WASHINGTON, D. C. — Electric household refrigerators and washing machines, ice cream cabinets, and quick frozen peas may now be exported to the United Kingdom by American manufacturers.

They are among 108 products added to the original list of 47 which may be imported into England under the British Token Import Plan. This plan allows U. S. manufacturers to reestablish trade on specified items banned during the war.

The first list included vacuum cleaners and parts and cooking and heating appliances.

To be eligible for participation in this plan, American manufacturers must have exported the products to Great Britain before the war. Values of exports must not be in excess of 20% of the average annual shipment of each producer during 1936, 1937, and 1938.

NARC Outlines Steps For Formation of More Local Affiliate Groups

CLEVELAND—A step helpful to the formation of local organizations of refrigeration contractors and affiliation with the National Association of Refrigeration Contractors was adopted at the recent annual meeting of the national association in Cleveland.

Ten or more local refrigeration contractors, comprising an association, can now apply for NARC membership as an affiliated association by payment of a $40 initiation fee, and annual dues of $12 per local member per year, with a minimum, however, of $200 annual dues.

For example, 10 local association members would pay $40 plus $200, or an average of $24 each, for the initiation fee and annual dues. They could divide this up in any way they desired, as sometimes larger firms pay more than smaller ones.

Twenty local members would pay the $40 initiation fee plus $240 annual dues, or a total of $280 for the first year. This is an average of $14 per firm. Obviously, the more local members, the lower the average payment the first year. And of course the initiation fee is paid only once—at the time of making application for NARC affiliated membership.

With now nearly 800 members in 38 states, including 17 affiliated associations, NARC is launching a membership drive to get members in the other 11 states, and an affiliated association in each of the cities having 100,000 or more population. Refrigeration contractors in smaller cities can also have a local association of 10 or more members by including nearby cities, and adopting a country or territorial name.

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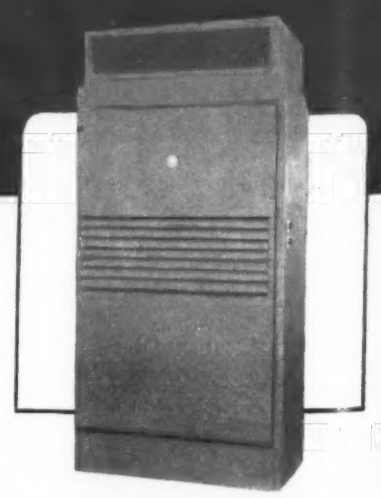

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Midwest R.E.W.A. To Meet In K.C.

DAVENPORT, Iowa—The Midwest Refrigeration Equipment Wholesalers Association will hold a meeting and election of officers at the Hotels Phillips and Muehlebach in Kansas City, Mo., on Jan. 10 and 11, E. L. Bengston, secretary of the association, has announced.

The election of officers for 1947 will be held at a closed wholesalers' meeting the morning of Friday, Jan. 10. On the same day, an open meeting with manufacturers, a luncheon, and evening banquet are planned, according to Mr. Bengston.

Though Saturday's schedule has not been completed, it will be devoted to special committee meetings, Mr. Bengston said.

Manufacturers' representatives are invited to attend.

Hotel reservations are being taken by E. L. Tramposh of Refrigeration Equipment Co., 2400 Grand Ave., Kansas City 8.

Friday's program has been announced as follows:

9:30 a.m. Closed meeting for midwest wholesalers at the Phillips hotel.

1:00 p.m. Luncheon at the Phillips hotel.

2:00 p.m. Manufacturers and midwest wholesalers open meeting at the Phillips hotel.

5:00 p.m. Cocktail hour at the Muehlebach hotel.

6:30 p.m. Banquet at Muehlebach hotel. Tickets from $4 to $5.

Carrier Air Conditions Istanbul Radio Station

NEW YORK CITY—Air conditioning equipment built by Carrier Corp., is being used to provide controlled temperature and humidity conditions in the studios and control rooms of the new $1,000,000 Turkish government radio station now being built in Istanbul.

The most powerful station in the Near East, using 150,000 watts, Radio Istanbul will be operated by the Press and Information Department of the government.

A Carrier reciprocating refrigerating machine, of 50-ton capacity, using "Freon," will be used to air condition seven studios and seven control rooms. The installation is being handled by G. & A. Baker, Carrier distributor at Istanbul, and was designed by T. Karakash, a Carrier trained engineer. A graduate of Roberts College, an American school in Istanbul, and of Purdue university, class of 1936, Mr. Karakash received training with Carrier before returning to Turkey.

The five-story building was designed by Turkish architects, while the radio equipment is being furnished by RCA. The station is expected to be in operation late next year.

Hoffman Opens 12 Days After Total Fire Loss

SPRINGFIELD, Mo.—Although an early-morning fire completely destroyed the building and entire stock of Hoffman Supply Co., refrigeration parts and equipment wholesaler here, the firm opened up temporary headquarters 12 days later with a complete stock, contributed by other members of the Midwest Refrigeration Equipment Wholesalers Association, reports Harry G. Hoffman, head of the firm.

"We think the Midwest group of parts wholesalers is the finest in the world in extending to us their stock to draw from until our stock is again built up and factory shipments can be obtained," declared Mr. Hoffman.

The building which was destroyed had been occupied only six days when the fire occurred, the Hoffman firm having moved in the previous Friday. Temporary quarters are at 520 Boonville Ave., but the company announced plans to rebuild at the site of the fire.

Oklahoma Appliance Stores Triple Sales Tax Collection Over September, '45 Total

OKLAHOMA CITY, Okla. — The research division of the Oklahoma Tax Commission has reported that 639 electrical and household appliance stores in the state collected $39,923.40 of the 2% state sales tax in September, 1946 as compared with $12,813.16 by 292 firms in September, 1945, a sales gain of 211.50% for the trade.

Ex-Congressman Lyle Boren Becomes New Dealer

SEMINOLE, Okla. — Lyle Boren, former fourth district congressman, has received a $250,000 capital stock charter for The Boren Co., which will operate stores here and at Konawa and establish stores in three other state cities in 1947. The stores will handle home appliances, furniture, hardware, as well as sporting goods.

Three Ways Proposed For Handling Trade-ins

NEW YORK CITY—Three methods of handling trade-ins on major appliances and radios were suggested at the American Fair Trade Council's annual forum held here.

The three methods are:

Inserting a clause in the retailer's fair trade contract prohibiting him from allowing more than the current price for the traded-in appliance.

Utilizing a manufacturer's center where consumers can get a certificate of value upon the producer's appraisal of the old equipment. The consumer can then take this certificate to the dealer for credit.

Utilizing a "blue book."

Foothill Refrigeration Firm Set Up

AZUSA, Calif. — Foothill Commercial Refrigeration Co. is the firm name under which Clarence C. Stumpf and Vernon E. Denny have published a certificate that they are conducting business at 680 Citrus Ave., Azusa.

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No. 69 1/4" Drill $11.85
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Each month, more SpeedWay Drills come off the production line; are being shipped each day. But, frankly, though we are beginning to cut into our mountainous pile of back orders, there's a deal of waiting still for a lot of people who are ordering SpeedWay Tools today. However, because they are worth waiting for, we suggest that you place your order now with your local SpeedWay dealer for earliest possible delivery.
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No. 89 equipped with Snap-Release Chuck. No. 89-J with Jacob chuck (as illustrated) $5.00 extra.

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How Revised Regulation 'W' Will Affect Dealers

DETROIT—Some technical details in the operation of the revised Regulation W, as they affect appliance dealers, have been cleared up by recent interpretations.

The regulation, as revised, provides for 15 months terms on instalment sales and requires a 33⅓% down payment on 10 classifications of home appliances valued at more than $50.

Appliances covered are cooking stoves and ranges; mechanical dishwashers; ironers; mechanical refrigerators, including food freezers, of less than 12-cu. ft. capacity; washing machines; combinations of any of the foregoing; air conditioners (room units); radio receiving sets, phonographs, or combinations; sewing machines; and suction cleaners.

Only those appliances whose sales price is $50 or greater are covered by the regulation. The sales price, called "cash price" in the regulation, includes the price of any accessories, and any delivery, installation, and service charges.

If the customer trades in his old appliance, the amount offered for the trade-in can be deducted before figuring the amount of the down payment.

For example, suppose an appliance has a sales price of $55. That appliance is covered by Regulation W. If the dealer agrees to give the customer $10 for his old appliance, he can deduct that amount from the sales price before computing the down payment.

Thus, the price of the appliance less the amount allowed for the trade-in is $45. One-third of $45 is $15. Therefore, $15 is required for the down payment.

Under the regulation, anything which the seller buys or arranges to buy from the purchaser at or about the time of the purchase of the appliance is considered as a trade-in.

When the appliance is sold on a "lay-away" plan, or a similar plan whereby the purchaser makes one or more payments before receiving delivery, extension of the instalment credit can be treated as not having been made until the date of delivery.

Before an appliance can be put into a prospect's home on approval, a deposit equal to the necessary down payment must be required.

Regulation W frowns on side loans or side agreements when it is known that such loan will be used for the down payment on a listed appliance.

Carrier Appointments - -

(Concluded from Page 1, Column 4)

Chicago district manager; D. B. Arnold, Cleveland district manager; G. E. Robertson, Atlanta district manager; and W. F. Peine, Dallas district manager.

Assignment of John E. Field as eastern zone manager for refrigeration, John Manion as western zone manager for refrigeration, and Frank E. Purcell as western zone manager for merchandising equipment has also been announced.

ASRE Meets Dec. 16 - -

(Concluded from Page 1, Column 5)

Institute.

Seven papers relating to various phases of refrigerated transport—refrigerator cars, trucks, and marine transport from the point of view of the designer, manufacturer, and user—will be presented during the Transportation Symposium to be held the morning and afternoon of Tuesday, Dec. 17.

Other technical sessions will be held Monday, Tuesday, and Wednesday morning, featuring such discussions as "Research Needs in Refrigeration," "Refrigeration of Prepackaged Fruits and Vegetables," "Low Temperature Conductivity Studies," "Condensation of 'Freon-12' with Finned Tubes," "Microbiological Aspects of Precooked Frozen Foods," a "Study of Frozen Food Wrapping Materials," and others.

Vets Want Conditioning - -

(Concluded from Page 1, Column 2)

sent to Gen. Bradley read in part: "It would be virtually impossible during the summer months to staff or occupy a hospital not so equipped." It added that "the cost of making a provision at this time for future air conditioning equipment appears to be a small item in comparison to the overall cost of the project. Such provision is in the interest of ultimate conservation of government funds."

Gen. Bradley has been quoted as saying that his decision, not to completely air condition the Phoenix hospital, is based on the advice of his medical division, that the medical profession is divided on the question of whether air conditioning is an aid or a hindrance to the recovery of patients.

Col. T. J. Cross, head of Veterans Administration in the Phoenix area, recognized the problem of the extreme weather conditions at the location of the proposed hospital, and agreed to exert his influence in an effort to have his chief reconsider.

Present plans call for the complete air conditioning of the Veterans Hospital in Fresno, Calif., but according to Gen. Bradley, this will be the only one.

The controversy involves heating in the winter, as well as summer cooling. Bradley's plan would use steam heat, which is considered by many to be outmoded in a climate such as prevails around Phoenix. Sponsors of the complete air conditioning ask that duct heating be installed.

In general, the feelings of the groups opposed to Bradley are "that in Phoenix, where air conditioning is such a necessity that modern conditioning machinery was developed and improved here, it is hardly practical to consider building any structures intended for human comfort without installing some central air conditioning unit."

The hospital, to be located at Seventh St. and Indian School Rd. here, is scheduled for completion within the next 18 months, according to Col. Cross.

Get the DRY BEVERAGE COOLER you want NOW

MARVEL

6, 8, or 10 feet long
39 inches high, 30 inches wide

Beautiful stainless steel and polished aluminum outside with polished aluminum interior. Heavy duty fin-type coils, designed to give fast cooling and less frosting. Rugged construction, first quality materials throughout. Stainless steel lids slide away or lift out. 8-inch utility shelf. Removable dividers inside. Toe space under edges.

Immediate Delivery!

DEALERS WANTED

Write, wire or phone today for information on franchise.

W. ALLEN ROGERS Industries

P. O. BOX 272-AC DEMOPOLIS, ALA.

INSIDE DOPE

by GEORGE F. TAUBENECK

(Concluded from Page 1, Column 1)

merce, for which I have only the best to say, in the so-called Department of Commerce has been kept alive and that's about all," he goes on. "They came out of the war in about the same condition as some of those released from concentration camps—still breathing but extremely weak from lack of food.

"The work of the department had been largely taken over by the State Department, which, of course, is mostly interested in the political problems involved. If it were not for Will Clayton, I doubt if there would have been much chance to keep it alive. He is one of the few in Washington with a background of both domestic and foreign trade, and at the same time willing to fight for the future of American business."

While encouraged because "recently real progress seems to have been made in the attempt to rebuild our foreign commerce work," Mr. Gifford has some definite suggestions on the subject:

He would like to see experienced men in all Washington positions related to international trade. He protests the appointment of small-town politicians to these jobs—"even though they may have come from Missouri."

Phoney Statistics Again

"We get statistical information by the ton or by the mile, but how often is it intelligently analyzed?" he asks. "We, and the world at large, should be given facts that are either helpful to us or that will improve our standing abroad. This is not done.

"For example, our own Department of Commerce figures showing trade between this country and South Africa never show our gold or diamond purchases, but they do show such things as sales of oil to South Africa. Why should this be the case?

"Surely government figures should be fairly stated. In many cases, our own figures show the balance of trade exactly opposite to what they really are. Why? Lord only knows."

Or take the matter of imports. How many know, Mr. Gifford wonders, that before the war two thirds of all imports into this country were duty free? Few Americans are aware of it and certainly it is not known by the businessmen abroad, he's sure.

"Instead we are told by our own government officials that we started the tariff war by the evils of the Smoot-Hawley Bill . . . ," he emphasizes. "That kind of a statement is pure bunk.

"It's true that much harm was done by that bill, but that's only part of the story. Why the Ottawa Conference with its Empire preferences was earlier by several years.

"You know, the Americans are a peculiar people. We actually believe what the other fellow says about us and about himself as well.

"The Englishman says he is modest, while we are inclined to brag. Actually, the English brag in every breath—and in so doing 'thank God they are not like other people.' That's what I call the modern Pharisee.

"The French claim to be the most polite people and in public that is probably true. In private with their families it's another matter, as anyone who has lived in France knows.

"The Germans claimed to be the most cultured. In some ways they possibly were, but we can probably ask ourselves just what constitutes culture. We can do without that particular brand."

Platform for Business

So what can businessmen do about all this? Mr. Gifford proposes they should:

1—Not only take an active interest in these problems, but back any national organization that has sufficient strength to make itself heard, such as the U. S. Chamber of Commerce, the National Association of Manufacturers, and the National Foreign Trade Council.

2—Demand the right kind of information out of Washington and then help them plan its distribution where it will do the most good—for business and not for votes.

But business, as well as government, must learn the rules of the game, Mr. Gifford stresses, while admitting that "it's hard to discover in Washington what the rules are."

"We have a right to expect that our government is interested in the welfare of our foreign business," he says. "Maybe we have the right but how does one go about getting that interest?

"It seems as though every possible obstacle is put in the way of normal business transactions. There are exceptions and again I refer to Will Clayton, who has done a great deal to eliminate foreign government buying missions. He cannot prevent a foreign government having a buying mission in this country, but he can compel them to buy through ordinary business channels and this he is doing as rapidly as possible.

"In spite of present difficulties we can only fight and work to secure the maximum amount of business that our own firms allow us to take.

"Let's compare this with what the British government is doing. They know that to rebuild the Empire, they must first rebuild their foreign trade to a greater volume than ever before.

"To accomplish this, they have restricted home consumption even more than they did in war times. The results are already very apparent.

"In addition they have the British Board of Trade which, as a help to foreign trade, is far in advance of anything we have in Washington. In other words, they know the rules of the game of Foreign Trade and do not hesitate to use them.

"Unless we learn more about the game, we are sure of having our aces trumped at the most inopportune moments. A good illustration of this is the speed with which the British are making trade agreements in all parts of the world.

"The most recent and most disturbing to us are those with Argentina and Brazil. At times I am inclined to think that 'We fiddle, while Rome burns.' "

Mr. Gifford warns that we, ourselves, are rapidly building up other barriers against foreign trade. On the problem of competitive prices—meaning delivered prices—he has this to say:

"Our costs of production have increased greatly since prewar levels, and all signs point to further increases. If our costs have increased faster than those in other producing countries or faster than the income has increased in the purchasing country, then it's the equivalent to an increase in duty by the purchasing country.

"After all, it's the delivered price including duty that counts. It's quite possible that we may lose some markets for this reason."

Taking the motor car industry as an example, Mr. Gifford notes that even before the last war a car was a luxury in most countries of the world.

"In fact," he says, "this country had about four times as many as all the rest of the world combined. What effect will the new prices have on this overseas market?

"A car will be more of a luxury than ever. This same problem will exist in many other businesses.

"The markets of the world are far greater than prewar," he continues, "first, due to devastation and short supply during the war, and second because of improved living standards and higher wages. Then, of course, the mere contact with American troops, and seeing how Americans expect to live, has a tremendous influence.

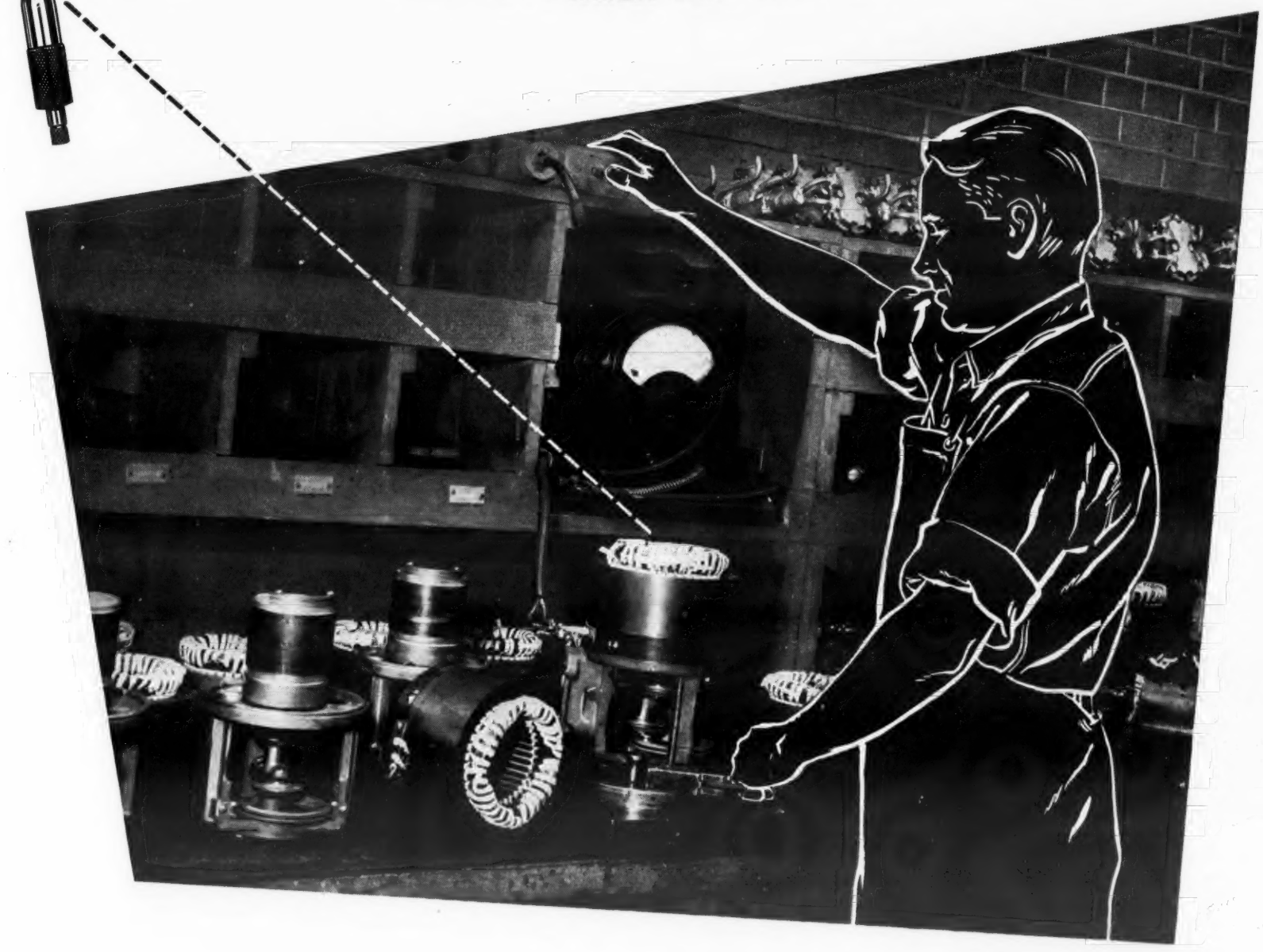
"Other new markets will open up as political disturbances subside. As an example, the British have always followed the policy that it is better to protect certain British industries than to really open a market.

"India is a good model of that policy. During the war a U. S. Mission made a special study of India and reported that there is a great wealth there and equal to the total wealth of the United States, and divided among less than fifty million people. The remaining three hundred million or more have nothing.

"Still, with this tremendous wealth, the entire country had about 125,000 cars, trucks, and buses. It is estimated that India could absorb from two to three million motor vehicles if restrictions were removed. So it goes throughout the world.

"Therefore, when England talks about increasing her foreign trade 50%, she is talking baby talk. She should increase her trade from 200% to 300% without taking more than her share, assuming, of course, that they really go after markets."

PRECISION MAKES PROFITS . . WHEN YOU SELL SERVEL*



STATOR CHECK SAVES SERVICE

There's no "guess work" about any part of the Servel Supermetic. Every vital element proves its ability to perform faultlessly before the assembled unit leaves the factory.

In the illustration above, for example, a Servel technician is making doubly sure that nothing will interfere with the proper flow of electric current through the windings of the motor stator. He "double-checks" it with a wattmeter to determine whether this important part may be passed to final assembly.

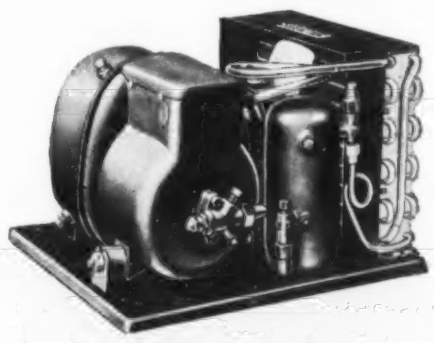
Every part of the hermetically sealed-in-steel power unit is subjected to similarly exacting tests. This quality control assures larger profits for Servel dealers and distributors. It reduces service and selling costs, and minimizes customer turnover.

Write today for Servel's new booklet, "Servel Supermetic." Learn more about these modern units that will fit exactly your condensing unit needs. Address Servel, Inc., Division RN, Evansville 20, Indiana.

Servel INC. EVANSVILLE 20, IND.

*Servel's new "Supermetic" condensing units will serve dealers and fixture manufacturers in every vital field

1. STORE FIXTURES
2. MILK COOLERS
3. HOME LOCKERS
4. BEVERAGE COOLERS
5. VENDING MACHINES
6. ROOM COOLERS
7. FARM FREEZERS
8. WATER COOLERS
9. INDUSTRIAL COOLING
10. VEHICLE REFRIGERATION



This is one in a series of advertisements featuring the scores of new machine tools and processes now being used to produce Servel Supermetics. Reprints are available to dealers individually or in sets as series progresses.

EMERGENCY
REFRIGERATION SERVICE

MECHANIC NOW WORKING AT

Firm Name _____
Address _____
Phone No. _____

MEMBER OF
REFRIGERATION AND AIR-CONDITIONING GUILD INC.
"An Association of Refrigeration Contractors"

Refrigeration & Air-Conditioning Guild, Inc.
"An Association of Refrigeration Contractors"

STANDARD NOT-HOME CARD

Phone (Your Number)

Date..... Time.....

Sorry you were not at home when I called to see about your Refrigerator. Please call for another appointment.

(Your Company Name)
(Your Address)

Serviceman.....

Kit Provides Forms, Cards for Contractors

NY Guild Issues It to Help New Member Firms Get Started

NEW YORK CITY—A standard kit expressly designed to help installation and contracting firms to get started properly in the refrigeration and air conditioning field is currently being distributed to new members by the Refrigeration and Air Conditioning Guild.

In the Guild's kit are copies of various forms helpful to the newcomer in operating his business, stated Nathan Edelstein, executive vice president. Said he:

"The Guild takes the theory that it will help the industry in general to help beginners in business. Therefore all the paper work necessary for a new establishment is contained in the Guild kit."

In the kit are the following items, some of which are displayed on this page:

1. Certificate of membership.
2. Membership card.
3. Two window display signs bearing Guild's emblem.
4. Two emergency repair signs for use in service man's car.
5. Two copies of a letter from the city police department protecting the service man's car.
6. Copies of standard commercial and domestic refrigeration maintenance agreements.
7. Standard invoice and receipt book forms including standard guarantee.
8. Standard "not home" card for use when service man calls and customer is not at home.

For Maintaining Records

"BUILD WITH THE GUILD"

Refrigeration and Air-Conditioning Guild, Inc.
"An Association of Refrigeration Contractors"
815 BROADWAY, BROOKLYN 6, N. Y. • EVERGREEN 8-1313

STANDARD INVOICE AND RECEIPT BOOK INCLUDING STANDARD GUARANTEE

(YOUR COMPANY'S NAME) No. 0000
Address
City
LOCATION OF JOB Date.....
Name
Address
City..... Apt.....
CHARGE TO
Agent
Address
City..... Order No.....

Classification	
C.O.D.	CHGE.
M.C.	N/C REP.

Machine Type..... Serial No.....
Trouble Reported

THIS IS YOUR INVOICE
IF SERVICE IS C.O.D. PLEASE PAY SERVICE MAN

MATERIAL USED

No. Part	Quant. Used	Description	Cost Each	Cost Total

.....Hours Charge for Labor at.....Per Hour for.....Men
Labor Charge
Total Amount of Invoice.....

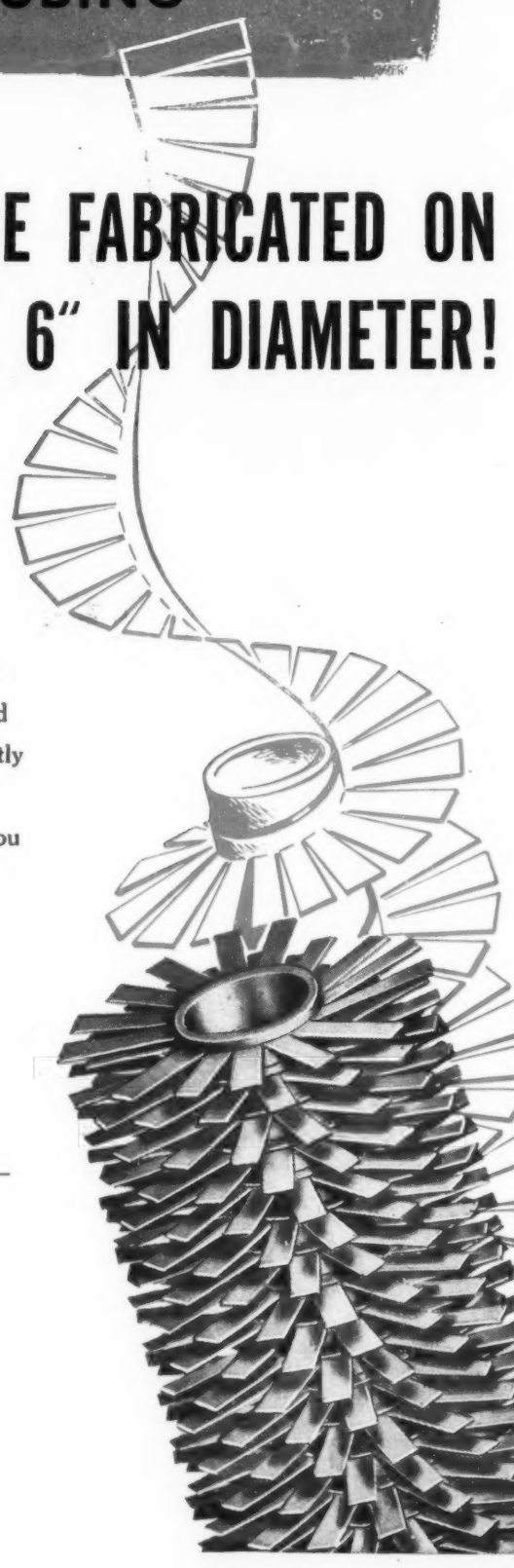
The Company does not warrant nor guarantee any labor or material except those specifically worked upon and listed above. Labor and material listed above, is guaranteed for 90 days. If one part of a certain unit is guaranteed, the whole unit is NOT guaranteed. A complete overhaul of condensing unit is guaranteed—90 days for materials furnished, and one year for labor (Domestic Job) — one year for materials and 90 days for labor (Commercial Job).

Service Man.....
Customer's Signature.....

☐ DOMESTIC ☐ INDUSTRIAL ☐ COMMERCIAL ☐ REPEAT CALL ☐ REPORT ☐ CONTRACT

NOTICE

TILCO FIN
Extended Surface
TUBING

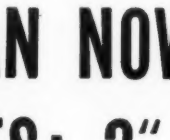


...CAN NOW BE FABRICATED ON LARGE TUBES: 2" TO 6" IN DIAMETER!

Thus, the unique advantage of Tilco Fin design and production technique—its great flexibility without any need for special dies—is further extended. And unchanged are the advantages of working with a plant that specializes exclusively in the manufacture of finned tubing in straight lengths—and is only interested in efficiently serving those who use such tubing.

Of course we'll welcome an opportunity to work with you—sending either our descriptive folder or specific information, without obligating you in any way.

Fins may be spaced as wide as 3 rows per inch...



Fins may be spaced up to 8 rows per inch...

Fins may be any desired height starting with ¼"

Tubes may be as small as ⅜" in diameter, as large as 6"

EXTENDED SURFACE
DIVISION OF DAVID E. KENNEDY, INC.
58 Second Avenue • • Brooklyn 15, N. Y.

Customer-Company Agreement

Standard *Commercial* Refrigeration Maintenance Agreement

(YOUR COMPANY'S NAME)
Address
City and State
Telephone Number

This contract made the ..... day of ....., 19....., by and between .....(YOUR COMPANY'S NAME)..... hereinafter called "COMPANY" and ..... hereinafter called "CUSTOMER."

WITNESSETH:

In consideration of the payment of ..... Dollars to be paid in installments of ..... Dollars, each (month, 3 months, 6 months, 12 months) ..... in advance, to be made by the CUSTOMER to the COMPANY, and the performance by CUSTOMER of conditions herein, the COMPANY agrees to render services hereinafter described, for a period beginning ....., 19...., and expiring on the ..... day of ....., 19...., on the refrigeration equipment (mechanical operating units only) and located as follows:

Full description of Equipment: .....

Location of Equipment: .....

THE COMPANY AGREES:

1. During the term of this contract, when requested by the Customer, to make such mechanical adjustments and repairs to the refrigeration equipment (mechanical operating units only) only when caused by natural wear and tear and which in its judgment is necessary for the proper operation of the equipment and to furnish such parts as it deems necessary, provided such necessary parts are available and obtainable.

THE CUSTOMER AGREES:

2. To report immediately any condition requiring correction and to grant free access to the location of all equipment to the COMPANY or its representatives, during regular business hours.
3. To hold the COMPANY harmless for any loss or damage to any person or to property no matter how caused, and for any negligence whatsoever, the COMPANY shall be obliged only to re-perform the service as agreed in paragraph 1.
4. That the above stated mechanical equipment is in good running condition as of the date of the inception of this agreement.
5. That (a) upon failure to pay any installment on or before the due date, or, (b) if at any time during the period hereof, service is performed to the equipment by anyone other than the COMPANY, or, (c), the equipment is removed from the premises without the supervision or consent of the COMPANY, then, at the option of the COMPANY, this agreement shall become immediately null and void.
6. That upon its failure to make any of the installments as above specified on the due date, the entire balance will then become due and payable with interest and the CUSTOMER agrees to make such payments to the COMPANY or its successors or assigns on demand.

IT IS MUTUALLY AGREED:

7. That this agreement does not include: (a) repairs which may become necessary because of any cause not directly attributed to natural wear and tear; (b) refinishing or otherwise repairing damages to the exterior or interior of the cabinet and/or accessories and/or on cases, counters, coolers, soda fountains, or other equipment whether or not said equipment was sold to the CUSTOMER by the COMPANY; (c) the replacement or repair of hardware, ice cube trays, defrosting pans or trays, grids, door gaskets, coil fronts, shelving, hinges, door handles and latches; (d) repairs necessitated through the freeze-up of water cooled compressors, improper water pressure, faulty plumbing, by accident, abuse or neglect. Any labor in making repairs and for parts furnished, which is excluded by this paragraph, when made by the COMPANY, are to be paid for by the CUSTOMER, as an extra.
8. That the COMPANY shall not be responsible for any electrical equipment covered by this agreement unless the proper size fuse protection is used. Upon signing this agreement the COMPANY shall inspect the electrical system and the CUSTOMER shall use a ..... ampere fuse, as herein specified.
9. The COMPANY shall not be responsible for delays in rendering service to the equipment herein described, due to or arising out of strikes, riots, lockouts, moving contingencies, transportation delays, fires, accidents, acts of government, loss of manpower due to act of government. Acts of God, war, invasion, bombardment, or any other cause beyond its control.
10. That no warranties or guaranties expressed or implied are made by the COMPANY.
11. The CUSTOMER shall accept the judgment of the COMPANY as final, as to the means and methods to be employed for any corrective work under consideration.
12. The COMPANY does not waive any of its rights hereunder by failure to insist upon a strict compliance with the terms of this agreement.
13. This contract contains the entire agreement between the parties and is to continue in force for a similar period unless terminated by either party by notice in writing sent by registered mail, thirty days prior to the expiration of any such term. The COMPANY may nevertheless cancel this agreement at any time by giving 30 days notice by registered mail to the CUSTOMER. This contract shall not be assignable without the written consent of the COMPANY.

(YOUR COMPANY'S NAME) .....
CUSTOMER

..... By .....
Accepted by

Legal Aids to Halt Price Cutting Tactics Cited by Attorney for Calif. Contractors

SAN FRANCISCO—An appeal to refrigeration men and other small business men to beware of a postwar tendency by big corporations to monopolize trade was voiced at a recent meeting of the Refrigeration Contractors' Association of Northern California. Members from more than 23 cities heard Harry Gottesfeld, attorney for the Valley Equipment Co., Lodi, Calif., warn that history has shown that "big interests" recognize "no restraint in trade practices, believing they are a law unto themselves."

"After every war," said Atty. Gottesfeld, "large corporations, using their tremendous reserves, initiate price-cutting wars with the object of driving out the small businessman and consolidating the market."

Today, he said, federal laws may be invoked to protect the little fellow and 45 states have unfair trade practices acts.

"If price cutting starts," he stated, "appeal to the manufacturers, wholesalers, and jobbers to warn the offending companies. If this fails, legal action may result in injunctive relief."

The contractors also heard reports from 12 members who attended the Cleveland convention and exposition. They voiced the common impression that no relief from equipment and appliance shortages would be felt until mid-'47.

Zed E. Jones, secretary-manager of the association, read a telegram and letter from the national body in which it sought to correct any impression that NARC was withdrawing support from the pending FTC probe of unfair trade practices in the dairy and ice cream businesses. NARC officials said they are enthusiastically behind the investigation, according to Mr. Jones.

By unanimous vote, the association adopted a resolution extending a vote of confidence to NARC.

Sterling Appoints James General Sales Manager

OMAHA, Neb.—George W. Carroll, president of Sterling Refrigeration Co. of Washington, D. C. and Omaha, announced last week the appointment of E. C. James, present vice president of the company, as general sales manager.

At the recent All-Industry Refrigeration & Air Conditioning Exposition, the Sterling company introduced the "Living Level" air conditioner.

The Sterling air conditioner is a commercial type using a 3-hp. air-cooled unit.

Alert Refrigeration Service Started at Long Beach, Calif.

LONG BEACH, Calif.—Alert Refrigeration Service is the firm name under which Geneva H. Howard has published a certificate that she is conducting business at 462 West Third St., Long Beach.

Army Reveals Role Air Conditioning Played In Manufacture of Atomic Bomb

OAK RIDGE, Tenn.—The vital part air conditioning has played in the manufacture of the atomic bomb is emphasized in information recently released by the Army Service Forces, U. S. Engineer Office, Oak Ridge, Tenn.

In the Clinton Laboratories, nuclear research center, operated for the government by Monsanto Chemical Co., several Carrier air conditioning units are used to maintain uniform temperature and humidity conditions for the scientific experiments conducted there.

In the electromagnetic separation plant for the concentration of U-235, large installations of equipment are used in several phases of the delicate chemical processes, "wherein controlled conditions of temperature and humidity are vital to production."

Also, the Army spokesman said, in another phase of the atomic bomb process, Carrier equipment cools the air going to "certain rooms where balanced temperature and humidity are vital to the success of the process."

A gaseous diffusion process for concentration of U-235 is conducted in a huge plant operated by Carbide & Carbon Chemicals Corp. for isotope separation at Oak Ridge. Carrier engineered, manufactured, and supervised installation of a large part of the air compressing equipment used in this plant. In the research laboratory, a Carrier air conditioning unit aids in maintaining highly accurate flow measurements.

Another large unit supplies properly conditioned air to the main control room of the switch house, where constant temperature, low humidity, and absence of dust particles are necessary.

Locker Plant Shares Quarters With Restaurant, Supermarket

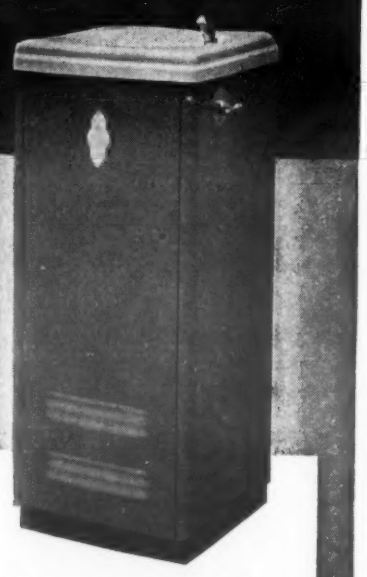
SIDNEY, Ohio—A building which will house a locker plant, supermarket, and restaurant is now being constructed here for H. V. (Chick) Wheeler, part owner of the McClure & Wheeler market.

The plant will include approximately 500 lockers, most of which are said to be already rented. Installation of lockers and refrigeration equipment is being handled by Refrigeration Service Shop, Inc., of Dayton.

Cold Storage Plant for Lease

WATERTOWN, N. Y.—A cold storage plant, approximately 90 by 72 ft. in size, located on the Pine Camp military reservation, is being offered to the public for lease to the highest bidder for a period not to exceed five years.

It's a REVELATION —that's all!



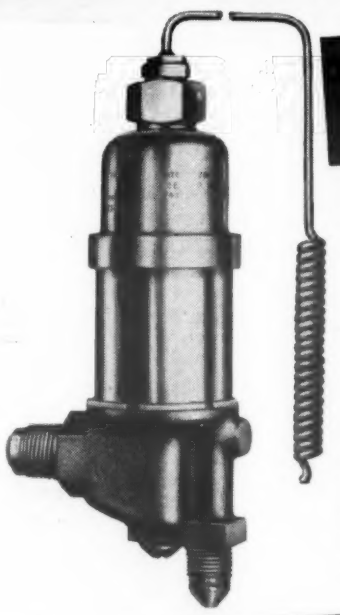
★ Exclusive Dealer Franchise
★ Now in quantity production
★ All sizes: Industrial and Commercial
★ The last word in...

ELECTRIC WATER COOLERS

Revelation Company
Division of
Interstate Engineering Corporation
2600 Imperial Highway
El Segundo, California

"DETROIT"
HALLMARK OF THE BEST
In Thermostatic Expansion Valves

This trademark on a thermostatic expansion valve indicates that it is top quality—a valve that you can be sure will give superior performance over a long period. "Detroit" Valves have been the standby of refrigeration men everywhere for many years. Easy to install—easy to adjust. Try these valves on your next suitable job.



NO. 673—"THE STANDARD OF THE REFRIGERATION INDUSTRY"

"Detroit" No. 673 has a long record of dependable performance in a wide variety of installations, and has been, for many years, "the standard of the refrigeration industry". Designed for average size commercial and air conditioning installations. Sensitive and accurate in operation—gas charged for instant response and reduction of motor load during pull-down cycle. Duraflex bellows and Delubaloy needles and seats resist corrosion and assure long life.

UNIT NUMBERS OF NO. 673 VALVE
Stock Items with Your "Detroit" Wholesaler
Use "Detroit" Unit Numbers when Ordering

Unit No.	Refrigerant	Max. Pressure	Connection
6731968	Freon-12	15	Inlet ⅜" SAE for ⅜" x ¼" reducing nut. Outlet ½" SAE
6731428	Freon-12	55	
6731563	Methyl	10	
6731411	Methyl	40	

Rated at 1 ton Freon-12 or 2 ton Methyl

No. 573—THE SAME SUPERIOR PERFORMANCE AS THE NO. 673 FOR SMALLER INSTALLATIONS

This valve, in ½ ton (Freon-12) capacity, has the quality and operating characteristics of No. 673. Designed for small commercial installations, its double diaphragm gas charged power element permits close superheat control at low suction pressures and provides motor overload protection in its simplest, most effective form, using only one power element.

UNIT NUMBERS OF NO. 573 VALVE
Stock Items with Your "Detroit" Wholesaler
Use "Detroit" Unit Numbers when Ordering

Unit No.	Refrigerant	Max. Pressure	Connection
57300	Freon-12	45	Inlet ⅜" SAE for ⅜" x ¼" reducing nut. Outlet ½" SAE for ½" x ⅜" reducing nut
57309	Freon-12	10	
57311	Methyl	35	
57315	Methyl	5	

Rated at ½ ton Freon-12 or .9 ton Methyl

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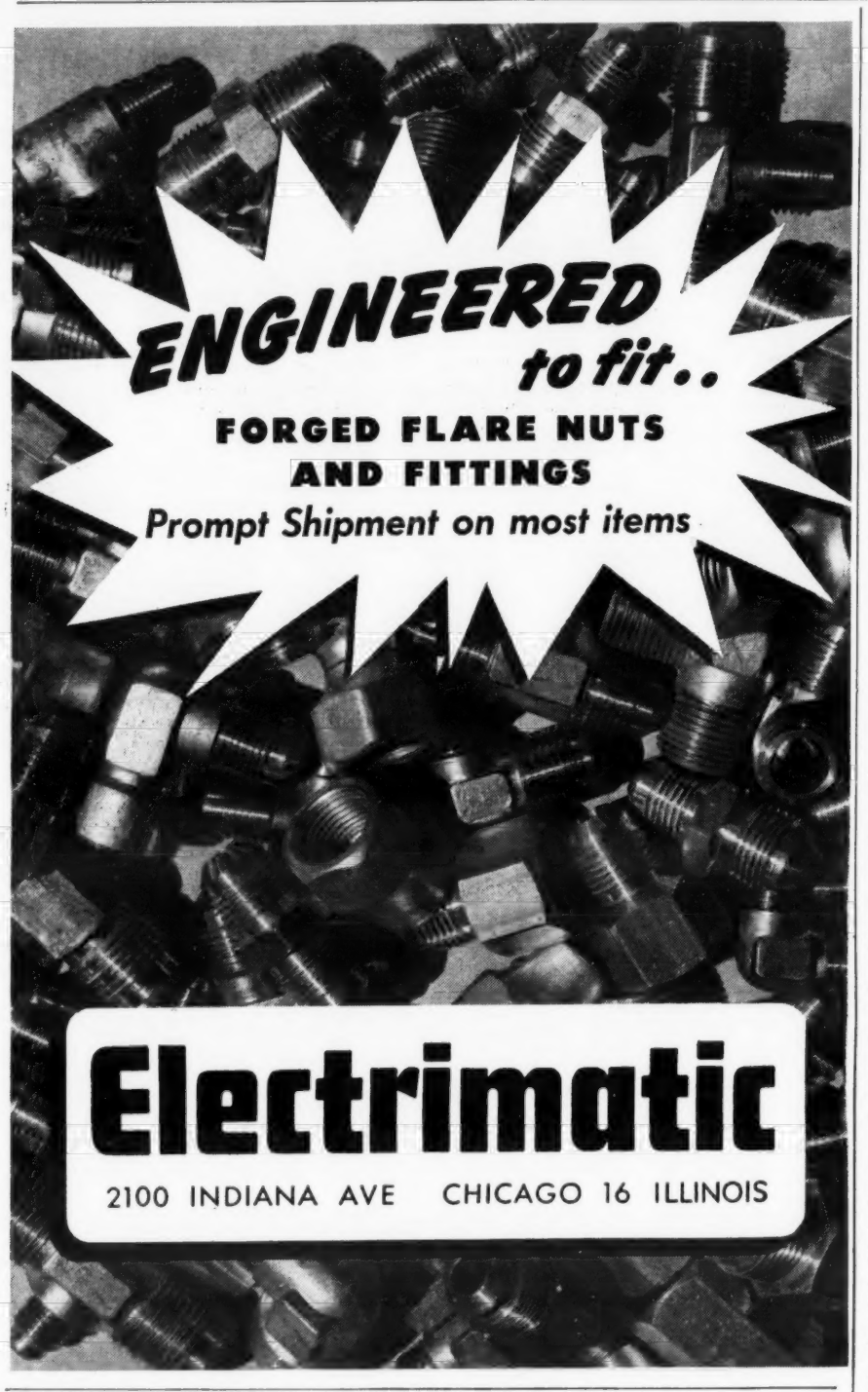


THE MASTER SERVICE MANUALS — — — — — — — and other books of the Refrigeration Library are depended upon as textbooks in trade schools from coast to coast.
BUSINESS NEWS PUBLISHING CO., DETROIT

Wide-Awake Display, Promotion Methods Help Grocer Double Frozen Food Sales

BRIDGETON, N. J. — Take a brand-new display case, add one aggressive store manager, mix in several sure-fire merchandising ideas, and you have a recipe for selling frozen food that has customers here asking for more.

Percy Gorsen used it in his produce store and found his frozen food sales doubled the former $250 weekly volume. Mr. Gorsen, who runs the Gorsen & McCormick Produce Mkt. had formerly been content to let his frozen food section play second fiddle to the rest of the food departments. But the emphasis on frozen foods during the rationing of canned goods promptly changed all that. Public acceptance of frozen foods convinced Mr. Gorsen that this phase of his business could very well stand some additional exploitation.

First thing he did was to purchase a $1,300 Hussmann-Ligonier frozen foods storage cabinet with more than twice the capacity of his old display case and spot it near the entrance of the store, where it would attract the most attention. Then he instituted a system of placing large color photos of foods along the ledge at rear of the cabinet for maximum eye-appeal.

Using such tactics is only good business sense, Mr. Gorsen has learned. "Frozen foods, like any other specialty item, require a great deal of merchandising technique," he points out.

Examples of the effectiveness of such techniques are numerous. Consider, for one, the technique of giving the customer a chance to see what she is buying. Mr. Gorsen believes this is a key to sales. "The most common complaint of women in regard to frozen foods is the fact that they cannot see what they are buying. We spend approximately $3 a month for cellophane sheets, which makes it possible to cut off the top of one carton and seal tightly in cellophane to answer the complaints. As an indication of how effective this idea has been, as soon as any new item [was] introduced without the cellophane, sales fell off—but they [were] immediately restored by stepping up the visibility by the use of cellophane."

Another factor contributing to the store's present selling rate of 1,600 packages of frozen food per week simply called for "mixing up the merchandise." Instead of always stocking staple foods in the same section of the refrigerator, they were deliberately shifted from day to day. Thus, the customer, when searching for a particular item, usually would handle two or three others before she found whatever she came in for. And Mr. Gorsen discovered his customers willing to experiment with one of the new lines. This was especially true with pre-cooked frozen foods, which have moved swiftly ever since they were mixed up with staples.

Of course, if all of these devices fail to snag a customer for frozen foods, Mr. Gorsen has still another that has paid off well. All the sales personnel in his store have instructions to ask "Have you looked in our frozen foods case?" whenever a customer complains that she cannot find a particular food item. Whether or not the item is actually in the case doesn't matter—practically every customer usually takes the trouble to look over the frozen foods on display.

Eventually, the Gorsen Mkt. plans to use a woman demonstrator on weekends to cook up specific frozen food dishes and pass them out as samples for Gorsen's customers to try.

Tappan Range Design Remains Until Summer

MANSFIELD, Ohio—Postponement of any major design changes in Tappan gas ranges until the summer of 1947 has been announced by A. B. Ritzhenthaler, vice president in charge of sales.

This announcement was made after it was learned many dealers have waiting lists that cover allocations for many months ahead. Despite this Tappan ranges have been shipped without interruption since V-J Day.

It was pointed out that at present, unlike normal years when sales must be stimulated by model changes, it is production rather than sales which must be stimulated to the fullest extent.

"Under this program," Mr. Ritzenthaler said, "Tappan dealers are assured of a continued maximum volume of deliveries, avoid the complications of price changes resulting from new models and are able to formulate their own plans."

Rochester Vets Rebel Against Use of Coin-Operated Washers

ROCHESTER, N. Y.—Forty-eight veterans' families have launched a campaign against slot machines—at least the kind that are on washing machines in their state housing project. They don't see why they can't use their own machines.

The families oppose a dictum posted by Follett L. Greeno, manager of the local state housing project, ordering privately owned washing machines to be removed from the basement of the new Concord Apartments.

Coeds Find Frozen Lunch Saves Time, Money, Effort--and Sweet Disposition

ITHACA, N. Y.—Tired of standing in a long line for 20 minutes every day just to get lunch in the cafeteria, three graduate co-eds at Cornell university here turned to the university's freezer research office for help.

Why not have frozen lunches?

Mrs. Nancy K. Masterman in the freezer research office was willing to let the girls use freezer facilities provided they kept records on the time and money they spent. The girls agreed.

They decided that each co-ed should assume the responsibility for lunches over a two-week period. Thus, each had a turn every six weeks.

The co-eds found that shopping for lunch supplies required an average of 25 minutes every two weeks. It took 60 minutes to prepare the sandwiches. Daily preparation and cleanup accounted for another 80 minutes for the fortnight.

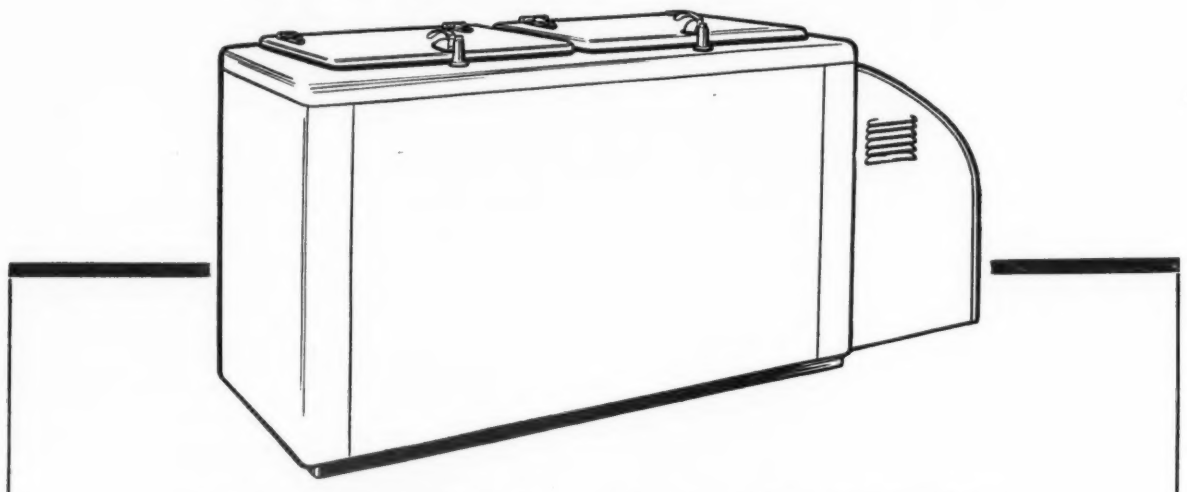
Thus each student spent a total of 165 minutes every six weeks, or an average of seven minutes a day (for a four-day week), in preparation. This, they found, was a daily saving of 13 minutes over the 20 minute wait in the cafeteria line.

It cost less to eat, too. They discovered that they could buy their lunch materials for an average of 17 cents per day. Figuring labor at $1 an hour, 12 cents was added, making a total of 29 cents for each lunch.

The girls found it economical to make two loaves of bread into sandwiches at one time. There was no waste of mixes since none were left over and they had a variety of sandwiches from which to choose. Sandwiches were made by assembly line methods.

In addition to sandwiches, foods such as soups, cookies, cakes, cream puffs, and ice cream were stored in the freezer.

Just for contrast, one of the co-eds prepared the lunches daily for a few times without using the freezer. She reported that it was not only more costly in time and wasted food, but her disposition was spoiled for the rest of the day by the bother of the needless preparation and rush.



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SANITARY 12.5 CUBIC FOOT MODELS
AVAILABLE COMPLETE, LESS CONDENSING UNIT

Attractively modern in style, heavily built with steel welded frame, rich in many unusual and exclusive quality construction features, SANITARY Freezer Cabinets are now in limited production for shipment on a 30 to 60-day basis. Each cabinet is complete with freezer plates, cold control and "Freon-12" expansion valve requiring merely installation of your own condensing unit. Typical of SANITARY design and engineering, every detail in these Freezer Cabinets is aimed at long service life, high efficiency in food freezing and storage—at lowest operating costs.

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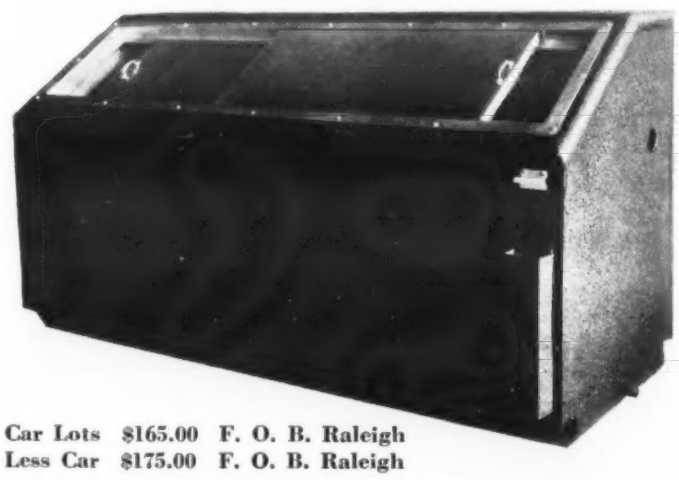

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A. J. Edmundson, General Manager

WILLIAM E. ANGLIN

* * *

Anglin to Conduct Cooler Research at Dr. Pepper

DALLAS, Tex.—Effective Dec. 1, William E. Anglin will join the Dr. Pepper Co. national headquarters staff at Dallas as research engineer in the firm's cooler and vendor dept.

Mr. Anglin will be engaged in the research and further development of a complete line of refrigeration equipment for the Dr. Pepper Co. and Dr. Pepper bottlers.

A graduate refrigeration technician, Mr. Anglin has been associated with Servel, Inc., for the past four years. He held the post of factory service supervisor for Servel's Electric Refrigeration Department.

While at Servel, in addition to his regular duties, Mr. Anglin taught refrigeration training courses at the Evansville Evening College of Vocational Training. Mr. Anglin has more than 11 years experience in service and application engineering both in commercial and household refrigeration. Mr. Anglin was graduated from the Utilities Engineering Institute in 1935.

Westinghouse, G-E Report to TRRF:

Low Temperature Starters, Enclosed Fixtures May Permit Fluorescent Lighting Operation at 0° F.

BERKELEY, Calif. — Satisfactory starting of fluorescent lighting can be effected at a temperature as low as 0° F., General Electric Co. and Westinghouse Electric Corp. have informed The Refrigeration Research Foundation here.

The Foundation is considering investigating the application of fluorescent lighting to low temperature rooms, at the suggestion of Harlan Nissen, president of the National Association of Refrigerated Warehouses.

"Application of fluorescent lighting to this problem has had very little use or experimentation, because fluorescent lighting was found to be most efficient at normal room temperature, and becomes increasingly less efficient in light output at lower temperatures, as well as at higher temperatures," a recent TRRF bulletin said the companies reported.

"The effect of low temperatures on the lamp can be offset to a great extent by enclosing the lamp. However, since increasing the bulb wall temperature will also decrease light output, the enclosure of the bulb also creates a problem.

"Normal light output is conditioned on maintaining the bulb itself within a certain temperature range. Also, low temperature creates uncertain starting."

The bulletin said both companies state that with available low temperature starters and enclosed fixtures, satisfactory starting can be experienced down to 0° F. Neither company states that satisfactory operation could be obtained, at present, at any lower temperature, according to the bulletin.

Day York Purchases New Portland, Ore. Quarters

PORTLAND, Ore.—Day York Co., York distributor for northwest Oregon and southwest Washington, has just announced the purchase of a two-story building here, to be used for offices and warehouse space.

The structure, which reportedly sold for approximately $50,000, is the former plant of the Messal Bag Co. and is located at N. Lewis St. and Railroad Ave.

Dealer Enters Commercial Field; Changes Firm Name

ALBUQUERQUE, N. M. — H. A. Marsh Sales Co. is the new name which the former Albuquerque Norge Co. adopted on Dec. 1, 1946, C. A. Clayton, general manager, has announced.

The change was made, according to Mr. Clayton, because the firm now carries a number of lines of home appliances, commercial refrigeration, and other equipment in addition to the full Norge line.

"We are going more extensively into the field of commercial refrigeration and are adding a full line of restaurant and other food serving equipment," Mr. Clayton announced.

There has been no change in ownership or location, he added.

For DEPENDABLE Refrigerants

SPECIFY "EXTRA DRY ESOTOO" (Liquid Sulfur Dioxide)

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FRIGITEMP CORP.
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MAin 2-9093

Complete Line of HERMETIC Self-Contained OPEN TYPE and REMOTE TYPE Refrigerating Units
⅛ TO 15 H.P.

UNIVERSAL COOLER
MARION, OHIO — BRANTFORD, ONTARIO
WE SELL TO MANUFACTURERS ONLY
UNIVERSAL COOLER DIVISION
International Detrola Corporation

IT'S ONLY THE BEGINNING

After four years of wartime limitations and restrictions, Koch gradually is resuming normal production. Day by day and model by model, the coming year will see the return of Koch pre-war standards of quantity production and prompt shipment.

Manufacture is already under way on the two refrigerators illustrated, the 42 and 65 cubic foot sizes of the famous 3800 Series. A 25 cubic foot model with many new and exclusive points of superiority will be ready soon. Other models, including display cases, will follow as soon as materials and facilities allow.

The production of Koch Equipment has really just begun. It should reach normal in a few months. It will be worth waiting for.

KOCH
REFRIGERATORS
North Kansas City 16, Mo.
Since 1883

They'll Do It Every Time . . . . By Jimmy Hatlo

BIGDOME IS A GREAT ONE FOR PASSING OUT TITLES AROUND THE SHOP-
SO I'VE DECIDED TO MAKE YOU MEN HEADS OF YOUR RESPECTIVE DEPARTMENTS- YOU'LL BE LET ALONE TO RUN THINGS AS YOU SEE FIT. IT'S YOUR SHOW, BOYS- GET IN AND HIT THE BALL!
BUT JUST LET THEM TRY TO PUT THEIR NEW TITLES INTO EFFECT... YEAH- JUST LET 'EM-
THANX TO EVERETT MARKMAN, CHICAGO, ILL.
9-27
J.H.
B-BUT J.F... YOU SAID-
AS HEAD BOOKKEEPER I THOUGHT..
YOU'RE NOT PAID TO THINK- THAT'S MY JOB..AND DON'T BE TRYING TO PUT WORDS IN MY MOUTH - I WANT A COMPLETE RECORD IN TRIPLICATE OF EVERY MOVE YOU MAKE...
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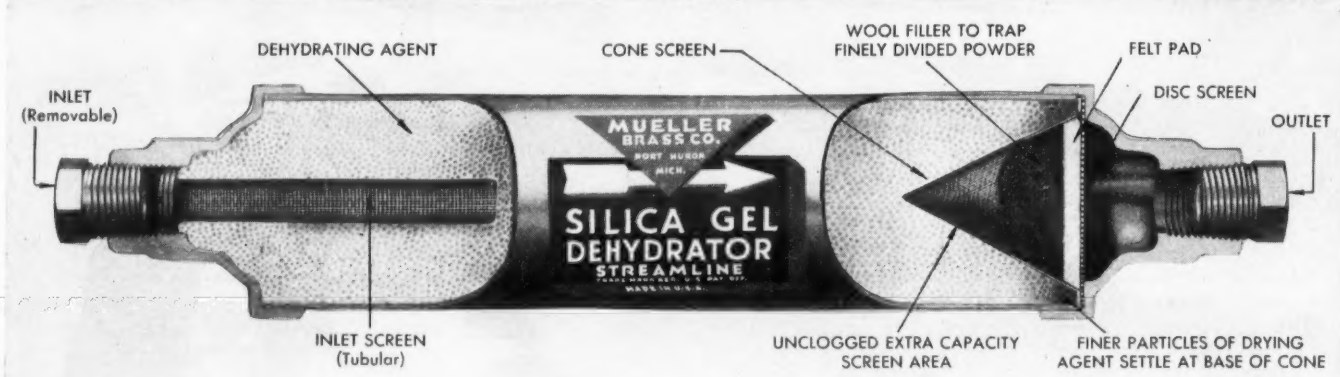
Out With Special Privileges - - Revise the Wagner Act!

Here is the New MUELLER BRASS CO.

REFILLABLE DEHYDRATOR



Readily Removable Inlet For *Easy Refilling!*

When recharging our new Dehydrator, simply remove the inlet plug—back out the slotted inlet screen tube—shake out the exhausted agent, then replace with new.

In addition to this convenient feature (see illustration above) Mueller Brass Co. Filters and Driers are provided with the CONE SCREEN OUTLET, a specially designed filtering element that adds immeasurably to the life and efficiency of Driers and Filters.

Almost all crystalline dehydrating agents are subject to a certain amount of abrasion while a dehydrator is in service. Small portions of the dehydrating agent break down into very fine powder and crystals. Unless a well-designed filtering element is incorporated in a dehydrator, these fine crystals and powder have a tendency to clog the outlet filter, resulting in restriction to the flow of refrigerant.

With the MBCO. CONE SCREEN OUTLET, such finer crystals and powder are forced to the base of the cone, leaving the center and tip of the screen open to the free flow of refrigerant.

In adddition, the cone screen is filled with pure wool which traps such particles that are sufficiently fine to pass through the screen mesh.

Particular attention has been paid to screen areas in Mueller Brass Co. Filters and Dehydrators, so that each size permits efficient passage to the maximum refrigerant volume that is used in a particular size refrigerant line.

MUELLER BRASS CO. PORT HURON, MICH.

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AIR CONDITIONING AND REFRIGERATION News

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It's Always Darkest Before Dawn

JOHN L. LEWIS is an extraordinary fellow. Right now he looks like an ogre, a devil, the apotheosis of all the power-mad labor dictators rolled into one frightening symbol. Why does he seem hell-bent on destroying both the labor unions and the free enterprise system at one and the same time? Nobody we've found yet can answer that $64,000,000 question. John L. Lewis has an intricate, unfathomable mind. What he's doing now may appear to be crazy. To later-generation historians, however, it might seem patriotic and statesmanlike. Mind you, we don't say it is. We just say: Could be.

Lewis has precipitated a showdown—not between capital and labor—but between a monopolistic union and the government of the United States. This showdown, in the end, might turn out to be a magnificent service to the American public. It is the general public which suffers most from basic industry strikes.

Not only do consumers suffer, but unionized workers in all lines are thrown out of work whenever coal, railroad, or public utility unions set up picket lines. Just as in the case of jurisdictional union battles, these strikes prostrate innocent union men even as they threaten the lives and livelihoods of innocent bystanders.

That an impressive majority of organized labor is getting fed up with this sort of thing is an observation which was proved by the Nov. 4, 1946, election. Without millions of protest votes from disgruntled union members, Republican candidates could not have swept the industrial cities of the North so impressively. The public has "had enough" of rampant labor monopolies, and now even union members themselves are snarling amongst themselves. This year they have learned that nobody wins a strike, just as no nation truly wins a war. And the rank-and-filers are in a sullen mood about the trap in which they find themselves caught.

This coal strike is the last straw. It isn't a strike against the owners, because the government now has possession of the mines. It's a strike against the government, against union members everywhere (without coal, most of our industries will be forced to close down and lay off their working forces), and it's a strike against all the people.

Of course this situation cannot be tolerated. Lewis may bring the nation to its knees this *one time*. But if he does, he may do the country quite a service, because *then* the pressure of public opinion will be so strong that at last we should get some decent labor laws in this country. Here are some suggestions:

1. *No industry-wide bargaining.* The power of one man to shut down an entire basic industry should be clipped.

2. *No closed shop.* "The right to work" regardless of affiliation with a particular union—a right now restored to everyone in some states—may be added to the Bill of Rights in the U. S. Constitution.

3. *No violence.* Physical assault and battery, intimidation and coercion, are crimes *except* when perpetrated by "labor." The distinction between "labor" and common citizens should be erased.

4. *No secondary boycotts.* Labor disputes should be confined to the arguing parties, rather than involving helpless outsiders.

5. *No denial of free speech.* Employers should be allowed to present facts to their employes. And union members should be able to speak their minds without being barred forever from practicing their trades.

6. *No welshing on contracts.* Unions don't have to live up to contracts they sign; employers must. This should be equalized.

7. *No jurisdictional strikes.* Everybody gets hurt in these family quarrels. They don't concern the laboring man at all. They're just a matter of "cutting up the swag" (quarrels between thieves).

8. *No racketeering.* Unions should publish detailed financial statements which show *who gets the dough,* and *how much.* As it is now, the union business is the last lucrative racket for proved thugs and gangsters.

9. *No communism.* Too many unions are bossed by known communists, whose sole interest is to weaken America in preparation for war with Russia.

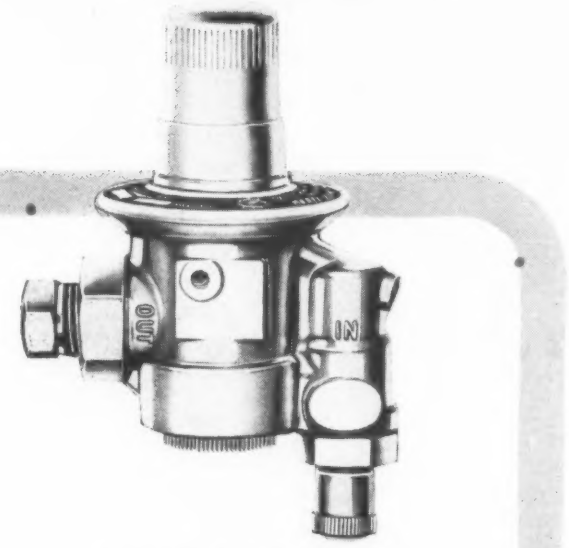
If Lewis forces Congress to take action along these lines, it will be a great day for the nation and for the world. America could get back to work again to elevate the living standards of all, and to promote peace, plenty, and happiness everywhere.

Your Service Work is Easier

because...

A-P REFRIGERATION VALVES are DEPENDABLE

Metal Cap ON A-P MODEL 204 AUTOMATIC EXPANSION VALVE PREVENTS VALVE HEAD FREEZE-UPS WHEREVER AN AUTOMATIC VALVE IS USED....



A-P Model 204
Automatic Expansion Valve.
Capacity, ¼ ton Freon

THE METAL cap over the adjusting stem on the new A-P Model 204 Automatic Expansion Valve is important in simplifying your service and improving refrigeration efficiency. It forms a tight seal against air or moisture, preventing freeze-ups in the valve head — while at the same time providing quick and easy accessibility to the adjusting stem where simple adjustment to the system can be made without the need for tools.

With a capacity of ¼ ton Freon, the A-P Model 204 is already lending longer life and improved operating efficiency to thousands of small refrigeration units. You'll want to know more about it, as you are called in to check today's and tomorrow's refrigerating units. Many will have the Model 204 as original equipment. Its proven DEPENDABILITY will minimize service call backs on these units through many years of satisfaction.

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8 Ft. Freezer Plus Locker Storage Saves Farmer Most, Claims Smith

CLEVELAND — "A medium-sized home freezer, supplemented by locker plant facilities, will mean a minimum investment and expense and a maximum of advantages and conveniences" for the average farm family, according to J. A. Smith, Frigidaire locker plant specialist.

Mr. Smith demonstrated with facts and figures how this combination brings dollars of saving to the farmer at the annual convention of the National Frozen Food Locker Association here during the All-Industry Show.

A farm family of five persons, requiring 14 cu. ft. of frozen food storage space, could save about $239 on an initial investment for a home freezer and realize $35 more in savings on yearly operation expense by adopting this combined service plan, Mr. Smith declared.

"Instead of buying a 14-cu. ft. home freezer for about $505," he explained, "the rural householder can hold the initial cost down to about $266 for an 8-cu. ft. model. By renting an additional 6 cu. ft. of storage space at a locker plant, he can enjoy the benefits and advantages of both facilities.

"The same logic will hold true for a farm family of seven requiring about 20 cu. ft. of frozen storage space. By renting 12 cu. ft. from the locker plant to supplement the 8-cu. ft. home freezer, about $419 savings on the initial investment can be realized plus a $53 savings each year for operational expenses."

Mr. Smith said that commercial locker rental fees, processing and packaging, initial investment costs, interest rates, electrical and even repair costs had been taken into account.

In making his computations, Mr. Smith cited a U. S. Department of Agriculture estimate that the average person requires 1,465 lbs. of food yearly for a liberal diet. Assuming that 15% of this food will be frozen, he figured that storage space is required for 219 lbs. of food per person annually.

Taking the National Electrical Manufacturers' Association standard of 35 lbs. of food per cubic foot in a home freezer, he estimated that 3 cu. ft. per person would be adequate.

An 8-cu. ft. home freezer will store about 280 lbs. of frozen food, he declared, but has facilities to freeze only approximately 20 lbs. at a time. It will fit conveniently into the average-sized kitchen, he added.

"Considering the average life of a home freezer as 10 years, the initial cost spread over this period is only about seven cents a day," Mr. Smith disclosed. "The unit will only use about 2.5 kwh per day," he said.

Fruits, vegetables, and specialties can be processed, frozen, and stored in the home freezer, he asserted. However, butchering and meat handling can be performed more efficiently by locker plant personnel.

"In addition," he said, "locker plant service permits butchering at anytime of the year. Facilities are available for slaughtering, dressing, chilling, aging, cutting, packaging, freezing, and curing meat in large quantities."

Mr. Smith pointed out that no other plan of frozen food storage met the situation for the farmer.

Combination household refrigerators with frozen food compartments did not provide enough space and could only keep foods frozen for comparatively short times, he said.

Small home freezers plus walk-in fixtures are too costly for the average farm family, he asserted.

"Even the locker plant does not provide all the facilities required," he stated. "Convenient frozen food handling calls for storage space in the home. By combining home freezer and locker plant facilities, the farm family can have all conveniences and advantages for comparatively little money."

COMPARATIVE OPERATIONAL EXPENSE STUDY OF COMBINED SERVICE AND 14-CU. FT. HOME FREEZER
Based on Two Turnovers Per Year and 35 lbs. Per cu. ft. of Storage Space

Expense Items	6 cu. ft. Locker Storage	Plus	8 cu. ft. Home Freezer	14 cu. ft. Freezer Only
1. Rental	$15.00		.....	.....
2. Processing and Packaging	$16.80 (420 lbs. @ 4¢)		$16.80 (560 lbs. @ 3¢)	$29.40 (980 lbs. @ 3¢)
3. Investment (Retire—10 Yrs.)	.....		$26.60 ($266 Delivered)	$50.50* ($505 Delivered)
4. Interest @ 4%	.....		$10.64	$20.20
5. Operating Cost @ 3½¢ kwh.	.....		$31.93 (@ 2.5 kwh./day)	$51.10 (@ 4 kwh./day)
6. Repairs	.....		$ 6.00	$ 8.00
7. Sub-Total	$31.80		$91.97	.....
8. Yearly Total Cost	$123.77			$159.20

*Mean of 14 to 16-cu. ft. Freezers—Based on recent Survey by TVA

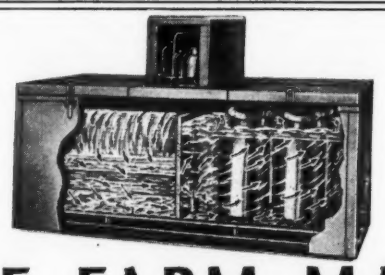
COMPARATIVE OPERATIONAL EXPENSE STUDY OF COMBINED SERVICE AND 20-CU. FT. HOME FREEZER
Based on Two Turnovers Per Year and 35 lbs. Per cu. ft. of Storage Space

Expense Items	12 cu. ft. Locker Storage	Plus	8 cu. ft. Home Freezer	20 cu. ft. Freezer Only
1. Rental	$ 30.00		.....	.....
2. Processing and Packaging	$ 33.60 (840 lbs. @ 4¢)		$16.80 (560 lbs. @ 3¢ lb.)	$ 42.00 (1,400 lbs. @ 3¢)
3. Investment (Retire—10 Yrs.)	.....		$26.60 ($266 Delivered)	$68.50 ($685 Delivered)
4. Interest @ 4%	.....		$10.64	$ 27.40
5. Operating Cost @ 3½¢ kwh.	.....		$31.93 (@ 2.5 kwh./day)	$ 60.68 (@ 4.75 kwh./day)
6. Repairs	.....		$ 6.00	$ 10.00
7. Sub-Total	$ 63.60		$91.97	.....
Total Cost Per Year	$155.57			$208.58

WILSON SELF-CONTAINED AUTOMATIC HIGH WATER LEVEL ZERO-FLOW

STOPS MILK SPOILAGE

COOLS THE DANGER ZONE FAST



Wilson ZERO-FLOW MODEL ZF8 HX50

Packaged-Unit Milk Cooler
Sizes from 4- to 24-can capacity

TO CAPTURE AND HOLD THE FARM MARKET

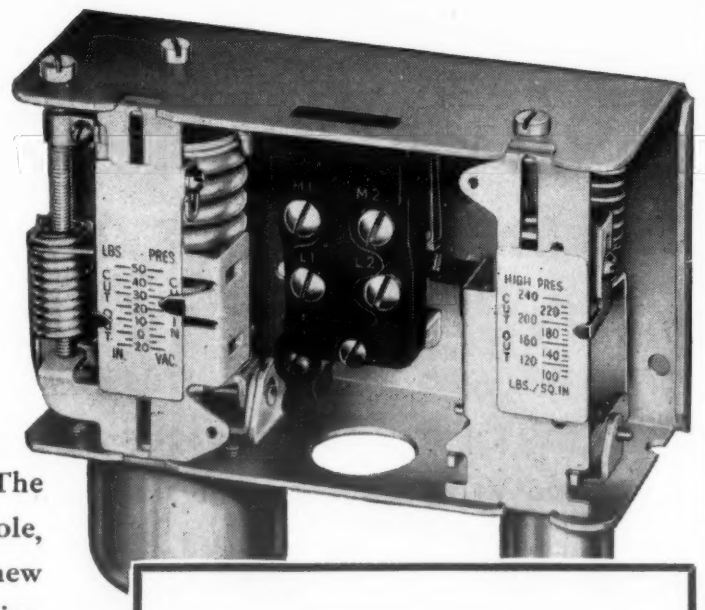
Specify Genuine "Refrigeration by Wilson"

• FARM MILK COOLERS • FARM FREEZERS • FARM REACH-IN REFRIGERATORS • FARM WALK-IN REFRIGERATORS

For Franchise Information, Address Dept. 11 WILSON REFRIGERATION, INC., Smyrna, Delaware

AT LAST! A Control with 2-POLE construction

Series 271 and 273. This "Dual" Control combines in one unit a temperature or low side pressure actuated mechanism and built-in pressure safety cut-out. Also (not shown) Series 270 and 272 "single" temperature or low side pressure control.



It's New!
It's Different!
It's Better!

Here is the control the refrigeration and air conditioning fields have been waiting for! The PENN 270 Series Control! It's built in 2-pole, single throw construction, and its many new design features assure 1, greater dependability; 2, more efficient operation; 3, freedom from contact trouble; 4, greater accuracy regardless of mounting position or vibration condition; 5, close differential; 6, remarkably sturdy contact mechanism; 7, better electrical performance; 8, ease of installation; 9, simple adjustments.

Penn Electric Switch Co., Goshen, Ind.— Export Division: 13 E. 40th St., New York 16, U.S.A. In Canada: Penn Controls, Ltd., Toronto, Ontario.

This means:

1. You can control polyphase motors (where protection against single phasing is provided) without line starters, magnetic contactors, etc.
2. It provides necessary separate circuits involved in control of multiple systems.
3. The equipment is protected against some of the hazards of motor insulation breakdown because, when wired in single phase circuits as a 2-pole switch, it always breaks the "hot" line.
4. Two separate load circuits can be controlled!

PENN AUTOMATIC CONTROLS

FOR HEATING, REFRIGERATION, AIR CONDITIONING, ENGINES, PUMPS AND AIR COMPRESSORS

Even Santa was Surprised!

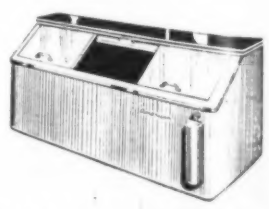
Santa gets plenty of "fan mail" this time of year . . . but even *he* would be amazed at the fine letters we've been receiving from satisfied jobbers, dealers and their customers.

For example: "American outsells the competition three to one" . . . "not a complaint in a carload" . . . "we're concentrating our sales efforts on your line exclusively" . . . these, indeed, are gratifying words; ample reward for the extra measure of manufacturing skill and materials that goes into every product. Proof that AMERICAN means *Quality in Refrigeration.*

Farm, Home and Commercial Freezers, 8, 15 and 22 cu. ft.

Extensional Walk-In Coolers, wood or metal clad, in all sizes.

Arid-Air Bottle Coolers, the last word in dry beverage cooling.



Write for new colorful brochure and price lists —some dealerships still available.

AMERICAN REFRIGERATOR & MACHINE, Inc.
2703 University Avenue, N. E., Minneapolis 13, Minn.

WHAT'S NEW

Dow Chemical Improves Styrofoam Insulation

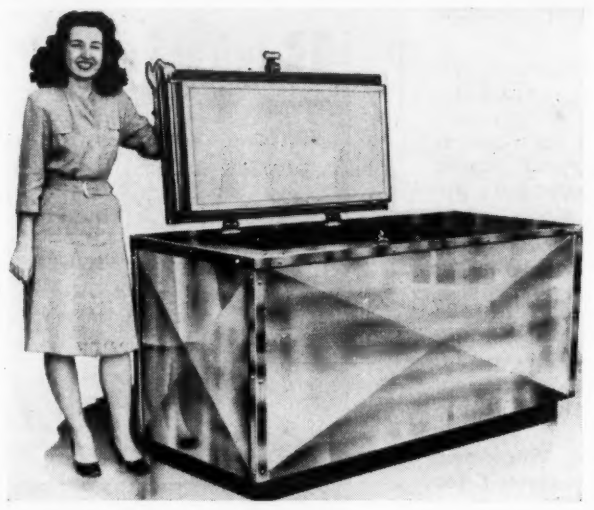
MIDLAND, Mich.—Intended specifically for low temperature applications, an improved form of its Styrofoam insulation has been developed by the Dow Chemical Co., according to Donald L. Gibb, manager of Dow's plastic sales division.

A mass of small walled or sealed cells comprises the physical structure of Styrofoam, thus preventing any permeation of water and ultimate freezing within the insulation, the company claims, also pointing out that this quality prevents any deterioration over a period of time.

It is made by expanding plastic Styron 40 times, and is claimed to have low thermal conductivity and good structural strength. It is tasteless and odorless and is said to have good resistance to mold and rot. In addition Styrofoam is claimed to show no tendency to disintegrate or settle.

"Plans are now under way to increase manufacturing facilities for the new material, but it is indicated that demand will far exceed production for some time to come," said Mr. Gibb.

Rogers Presents 1947 Model Freezer



This 12 cu. ft. stainless steel Rogers home freezer is now in mass production. It is powered by a ¼-hp. heavy-duty condensing unit.

* * *

DEMOPOLIS, Ala. — W. Allen Rogers Industries here has announced its 1947 model home freezer, which is in the hands of its dealers.

Already in mass production, the 1947 model is powered by a ¼-hp. heavy duty condensing unit, with controlled temperature from -15 to +3° F. It has a capacity of 12 cu. ft. Cabinet has 5 in. of insulation.

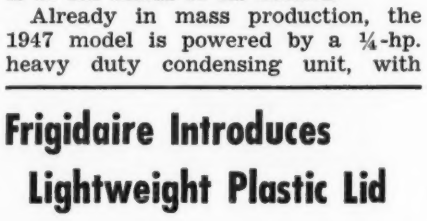
The cabinet measures 72 in. long, 30 in. wide, and 34 in. deep, and weighs approximately 750 lbs. The freezer may be obtained with stainless steel throughout, or stainless steel top with sides of either baked enamel or polished aluminum, the company announces.

Frigidaire Introduces Lightweight Plastic Lid

DAYTON, Ohio — An improved, lightweight plastic ice cream cabinet lid has been designed by Frigidaire Division of General Motors.

Constructed of molded Polystyrene and insulated with foamed Polystyrene, the new lid is claimed to be 50% lighter, more efficient, and stronger than the present model.

Weighing only about 5 lbs., the new lid is easier to open or remove from the cabinet. For example, if an attendant opens a half section of the lid 100 times a day, a minimum accumulated lift amounting to a quarter of a ton can be eliminated by using the new lightweight model. Regular Frigidaire lid features are being incorporated into the new design, including leak-proof hinges,



stainless steel reflector plate, and offset knobs.

The new lid is interchangeable on Frigidaire "all-steel" cabinets. Ice cream cabinets, being built at Frigidaire factories in Dayton, are equipped with the lids of the new design and limited quantities are being produced for the field.

Victor's New Year's Present to Distributors

Pictured here is Victor's new frozen food display cabinet, which is available in three sizes. All are self-contained with optional superstructure.

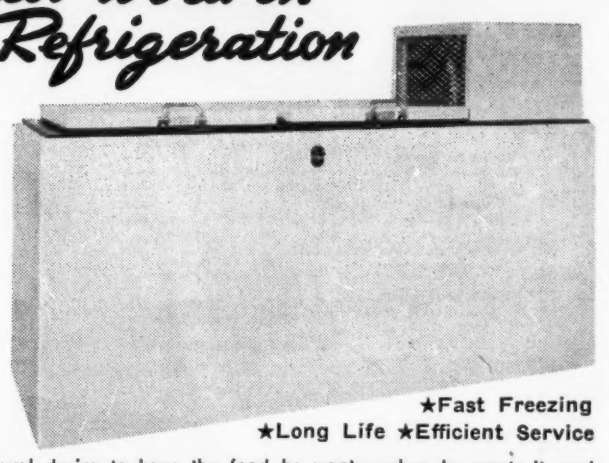
* * *

HAGERSTOWN, Md.—Victor Products Corp.'s new frozen food display cabinet should be in the hands of distributors shortly after the first of the year, announces J. Kingsley Noel, Jr., vice president in charge of sales.

Distribution will make available to dealers three models of cabinets, 10, 18, and 26 cu. ft. All units are self-contained, of steel construction, with optional superstructure.

Victor Products also makes "Quick Freeze" frozen food refrigerators, sectional walk-in refrigerators, milk coolers, bottled beverage coolers, and ice makers.

Locker·Freeze
The Last Word in Home Refrigeration



LOCKER FREEZE
GAMBLE & HAWLEY, INC.

★Fast Freezing
★Long Life ★Efficient Service

Your customers natural desire to have the food he wants—when he wants it, and the savings in time and money a Locker-Freeze offers makes a steady, lasting demand for this zero temperature food preserving unit. Locker-Freeze national advertising further increases this demand.

Line up with Locker-Freeze. Mail coupon for complete information. A model to fit every need.

GAMBLE and HAWLEY, INC.
833a OSAGE, KANSAS CITY, KAN.
Rush me data on Locker-Freeze Farm and Home Refrigeration.
Name .....
Address .....
City ..... State .....

IMPORTANT ANNOUNCEMENT

New Temprite Combination Water Cooler and Carbonator Now Available!

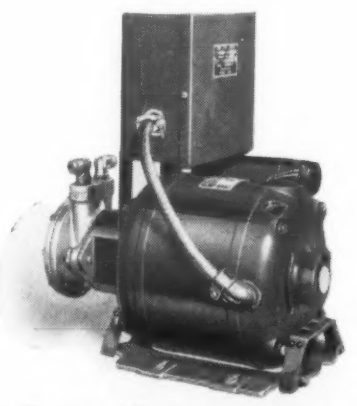
The completely new, highly versatile Temprite water cooler and carbonator does *everything* . . .

1. Instantly cools plain water.
2. Instantly carbonates water at low temperatures.
3. Dispenses cooled plain or carbonated water.

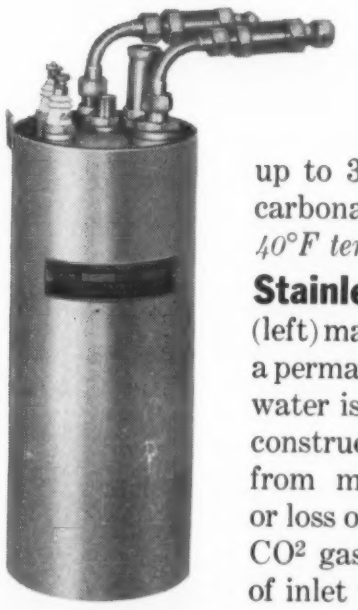
Extremely compact, this amazing combination unit includes water cooler and carbonator, the necessary refrigeration valves, check valves and fittings, motor, pump and relay assembly . . . *ready for immediate installation!*

Requiring less than 10 square inches of base space and 15 inches in height, the new Temprite may be quickly installed in soda fountains, coil boxes and other beverage dispensers!

WRITE FOR COMPLETE SPECIFICATIONS



Pump-Motor Assembly consists of a corrosion proof turbine type water supply pump mounted integrally with a ¼ h.p. motor, complete with starting relay, ready for immediate installation.

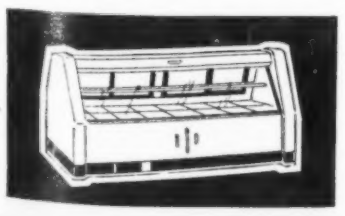


Another First . . . for Temprite is the result of advanced engineering and a thorough understanding of field requirements. The new Temprite combination unit dispenses up to 300 glasses of either plain or/and carbonated water per hour . . . *at a constant 40°F temperature.*

Stainless Steel Carbonator Section, (left) may be installed separately, wherever a permanent, satisfactory means of cooling water is already in use. All stainless steel construction insures long life and freedom from metal contamination. No venting or loss of CO^2 gas. Operates on only 75 lb. CO^2 gas pressure. Operates independent of inlet water pressure.

TEMPRITE PRODUCTS CORP.
Originators of Instantaneous 80° 40° *Liquid Cooling Devices*
43 PIQUETTE AVENUE DETROIT 2, MICHIGAN

FALL IN LINE WITH FOGEL



JOIN OUR HUNDREDS OF SUCCESSFUL DISTRIBUTORS
SELL OUR COMPLETE TOP-QUALITY LINE
INTERESTING PROPOSITION TO QUALIFIED DISTRIBUTORS
A FEW TERRITORIES STILL AVAILABLE. *WRITE TODAY!*

FOGEL REFRIGERATOR COMPANY • Since 1899
5400 Eadom St., Philadelphia 37, Pa.

See the new
Coolstream
ELECTRIC WATER COOLERS
ON DISPLAY
at your distributors!

Long-Lewis Hardware Co.
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Joseph Simons Co.
Hartford 5, Connecticut

Thermatic Engineering Co.
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Manufacturers Agents, Inc.
Washington 9, D. C.

Gray Products Corp.
Miami 36, Florida

W. B. Haggerty, Inc.
Tampa 1, Florida

Refrigeration Exchange, Inc.
Atlanta 3, Georgia

Interstate Electric Co.
New Orleans, Louisiana

Fidelity Engineering & Distributing Co.
Baltimore 2, Maryland

Miller & Seddon Co., Inc.
Cambridge 40, Massachusetts

Modern Refrigeration Sales Company
Detroit, Michigan

General Pipe & Brass Co.
St. Louis 8, Missouri

First Colony Distributors, Inc.
Raleigh, North Carolina

Refrigeration Sales Corp.
Cleveland, Ohio

H. G. Bogart Company
Toledo 4, Ohio

A. L. Sherman & Sons
Philadelphia 6, Pennsylvania

C. R. Rogers Co.
Pittsburgh 6, Pennsylvania

J. J. Slaughter Company
Ft. Worth, Texas

Electrical Distributing Company
San Antonio, Texas

Refrigeration Suppliers, Inc.
Norfolk 10, Virginia

Emmons-Hawkins Hardware Co.
Huntington, West Virginia

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A. F. Stubenberg, Ltd.
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THE Coolstream CORPORATION
240 Butler Street, Brooklyn 17, N. Y.

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LARKIN

MECHANICAL REFRIGERATION PRODUCTS

Humi-Temp Forced Convection Units—Patented CROSS-FIN-COILS—Bare Tube Coils—Zinc Fused Steel Plate Coils—Disseminator Pans—Heat Exchangers—Evaporative Condensers—Instantaneous Water Coolers—

LARKIN COILS, 519 Memorial Dr. S.E. Atlanta, Ga.

THE WATCHDOG OF THE NATION'S FOOD SUPPLY

450 Attend Conference Of New England RSES

PROVIDENCE, R. I.—Some 450 members and guests representing the eight chapters of the Refrigeration Service Engineers Society, which comprise the New England States R.S.E.S. Association, attended the group's second annual all-day convention held in the Hotel Narragansett here recently. The Providence chapter was host.

Paul B. Reed, chairman of the R.S.E.S. education committee, and Ted Glou, president of Refrigeration Equipment Wholesalers Association, were the principal speakers at the session.

William E. Tierney of Worcester, Mass., president, was re-elected for 1946-47 as were Arthur W. Andreen of Hartford, Conn., first vice president; Lee J. Wallace of New Haven, Conn., secretary; George Martin, Providence, treasurer; and Walter E. Quimby of Springfield, Mass., sergeant-at-arms. J. J. Madden of Boston is the new second vice president, and Robert Chase of Fairfield County, Conn., the educational committee.

Moulton, Buist Named by Turco

LOS ANGELES—Turco Products, Inc., manufacturer of cleaning and processing compounds, has announced the appointment of L. H. Moulton as national sales director and D. T. Buist as his assistant.

Mr. Moulton has been selling Turco products for 15 years, serving most recently as director of the eastern division. Mr. Buist joined the company in 1936.

Servicing Truck Refrigeration Units

Editor's Note: Continuing the series on servicing of truck refrigeration units, AIR CONDITIONING & REFRIGERATION NEWS presents in this instalment further data on changing drive belts in the Trail-Aire Conditioner manufactured by Advance Mfg. Co., with whose permission these articles are published. Beginning in next week's issue the NEWS will take up typical problems which have come in from actual users. The series was prepared in collaboration with Henry O. Kirkpatrick, chief engineer of Advance.

Instalment No. 11

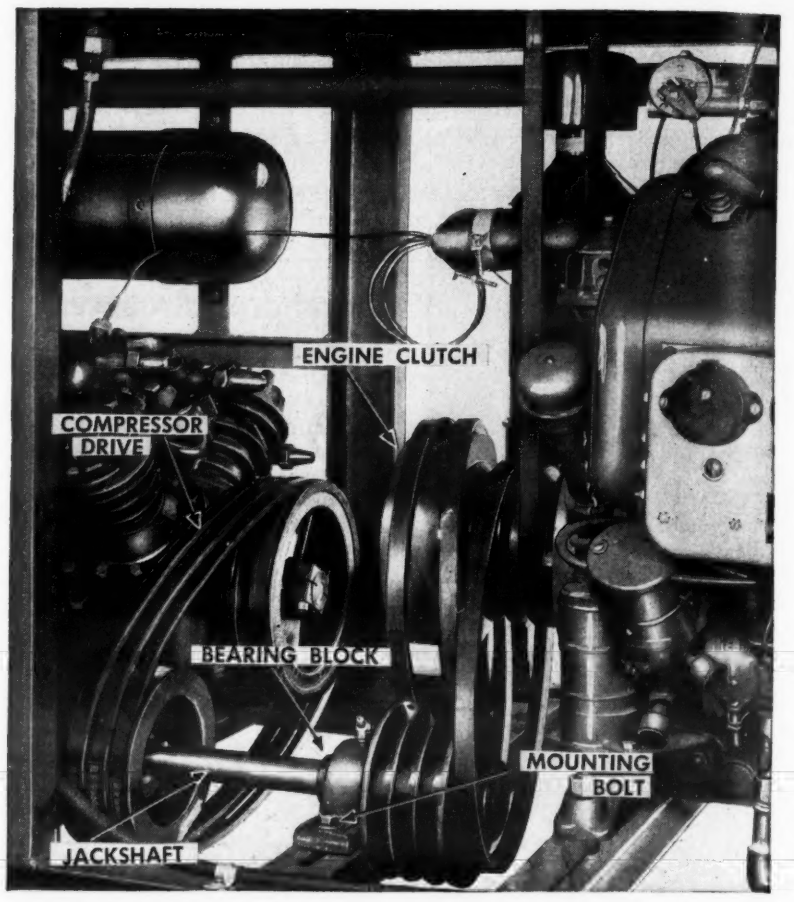


Fig. 17—Removal of main drive belts running between the gasoline engine pulley and jackshaft of the Trail-Aire unit is shown above.

* * *

Proper Belt Tension (Cont.)

The jackshaft is driven by three belts from the engine clutch. Another set of three belts from the jackshaft drives the refrigerating system compressor. A single belt from the jackshaft drives the lower fan.

If any of these belts on the jackshaft are to be tightened, make sure that the jackshaft remains in line with the engine clutch. This means that tightening a set of belts at one end of the jackshaft will necessitate tightening the set at the other end. To tighten, first loosen both bearing blocks by relieving the two studs on each.

Obtain the proper belt tension at each end by tightening the adjustment screws at the back of each bearing block. Tighten the two bearing studs on each block to secure the setting.

If the belts at one end of the jackshaft are tighter than the ones at the other end, do not try to even the tension by means of one bearing block adjusting screw. In such cases, loosen the four engine mounting bolts and move the engine until belts are under the same tension.

Under no circumstances loosen or disturb the compressor mounting bolts. They must remain tight at all times.

To remove the jackshaft belts first loosen the two mounting bolts at both jackshaft bearing blocks and relieve the tension screws behind both bearing blocks. Remove the belts from the jackshaft pulley. Slide each belt from the clutch sheaving, making sure that belt is pulled forward and out of the clearance gap. Install a complete set of three belts by reversing these steps.

Compressor drive belts may be removed by loosening the two mounting bolts at both jackshaft bearing blocks. Remove the two mounting bolts from the right end bearing block on the jackshaft. Relieve the tension screws behind both bearing blocks. Remove the jackshaft drive belts.

Remove the three belts individually from the compressor sheave, making sure each belt is pulled forward and out of the clearance gap. Raise the right bearing block and slide the belts under the block and off the right end of the jackshaft. Install a complete

(Continued on next page)

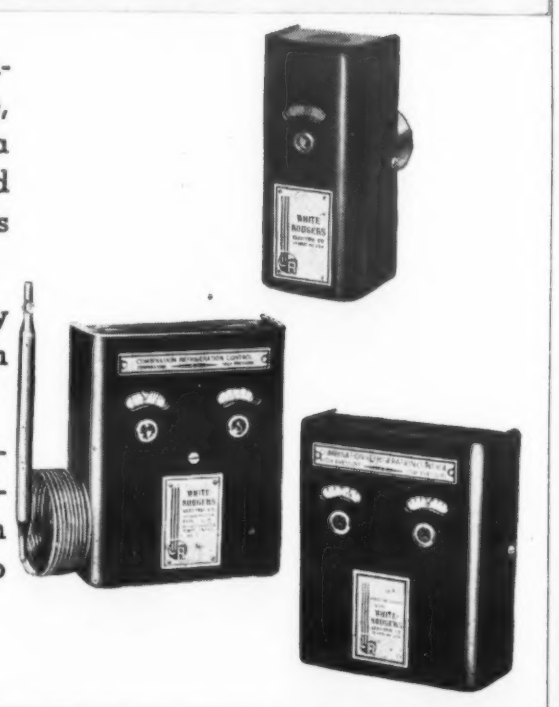
Chief Engineer Standardized on White-Rodgers Pressure Controls because

HE COULD THROW AWAY HIS GAGES

Because the dials of White-Rodgers pressure controls are marked accurately in pounds of pressure, or in inches of vacuum, the Chief Engineer of a large refrigeration manufacturer no longer needed to rely on gages to check the operating pressures of his products.

In addition, service costs decreased materially by the end of the first year after standardizing on White-Rodgers automatic controls.

If *your* air-conditioning and refrigeration products depend on the control of temperature or pressure for their operation, White-Rodgers controls can make them more dependable and satisfactory to your customers.



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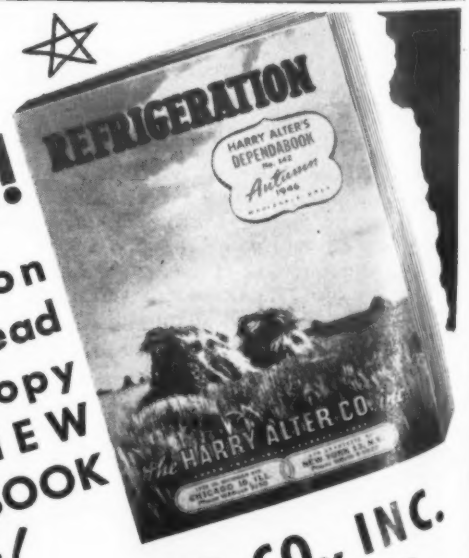
Controls for Refrigeration • Heating • Air Conditioning

IT'S A NEW ONE!

Just write on YOUR letterhead for YOUR copy of the NEW DEPENDABOOK today!



THE HARRY ALTER CO., INC.
1728 SO. MICHIGAN AVENUE
CHICAGO 16, ILL.
134 LAFAYETTE STREET
NEW YORK 13, N.Y.

Fig. 18-Removing Drive Belts

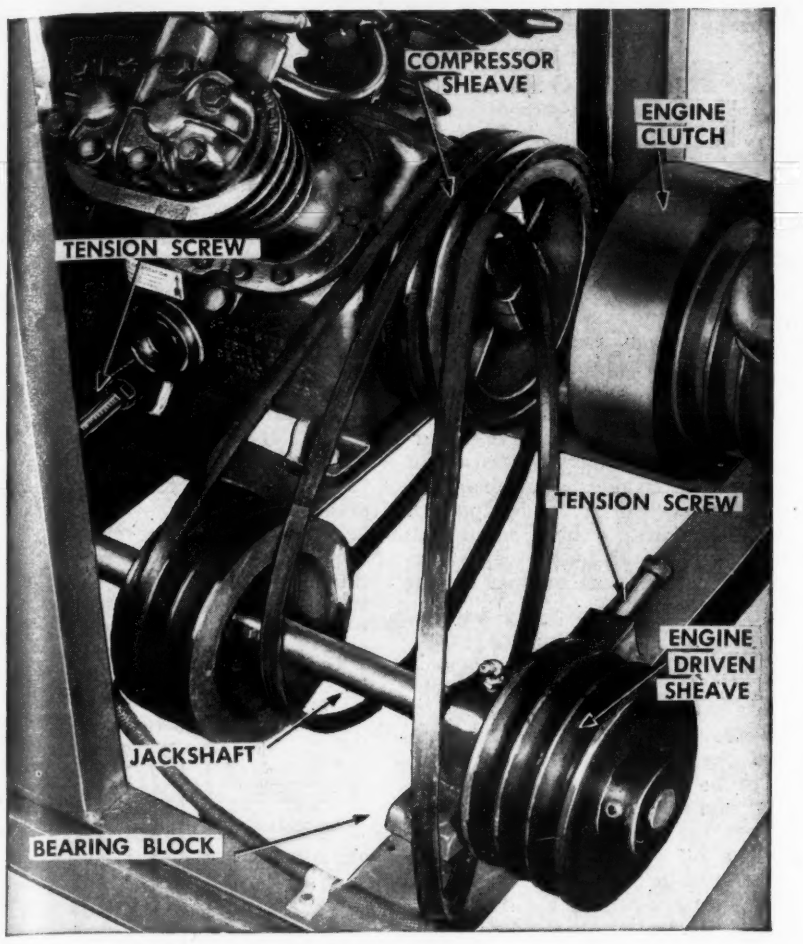


Fig. 18—Compressor drive belts being removed and replaced, as described in the text.

* * *

Proper Belt Tension (Cont.)

(Continued from preceding page)

set of three belts by reversing these steps.

Lower coil fan belt may be removed by loosening the two mounting bolts at both jackshaft bearing blocks and relieving the tension screws behind both bearing blocks. Slide the belts from the fan sheave and lift from the jackshaft pulley. Install a new belt by reversing these steps.

Fans

There are three fans in the unit. One is built integrally with the engine. Its function is to cool the motor and will require no servicing. The other two should be periodically inspected for symptoms of bearing wear and the resultant mis-alignment.

All fans, especially the lower fan, should be cleaned at regular intervals. Make sure that paper and rubbish are not lodged in the screen, coils, or fan proper. If steam is used to clean the fans, do not use steam over 250° and be sure to open the six hand valves.

The first of the two fans requiring periodic inspection is the circulating fan, which is sealed and located in the upper unit. This fan must run free in its bearings without binding. To check its operation, remove the circulating fan belt drive and turn by hand. The fan should turn freely and the shaft should have no shake or tightness.

The lower fan is located behind the hand valves. It draws outside air through the lower coil and exhausts it to the atmosphere. Checking the operation on this fan is the same as with the circulating fan. Remove the belt drive and check for freeness of turning and tightness of the shaft.

(To Be Continued)

Fig. 19-Changing Belt on Lower Fan

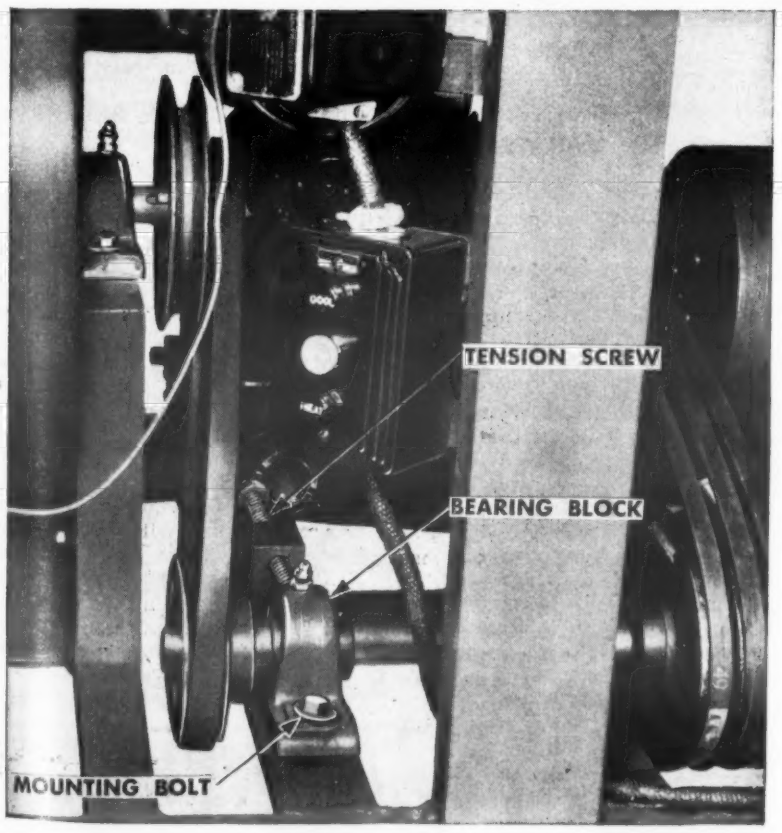


Fig. 19—This view shows the belt from the jackshaft pulley to the pulley on the lower fan of the Trail-Aire unit being removed.

WAA Sets 2 Metal Sales For Detroit In December

DETROIT—Two sales of government surplus aluminum sheets, strip, coil, rods, bars, wire, tubing, ingots, and magnesium sheets and tubing are scheduled to be held here during December, the local office of the War Assets Administration has announced.

The metals offered are valued at $877,976. The WAA expects to get between 53% and 69% return on them.

The materials are offered at fixed prices, according to the standard priority schedule.

Housing priority expediter qualifiers get first crack at all the material, the WAA said.

The first sale, at which all but the aluminum ingots are offered, starts for World War II veterans on Dec. 6 and follows this schedule:

World War II Veterans, Dec. 6 and 9.

RFC for Small Business, Dec. 10 and 11.

State and Local Governments, Dec. 12.

Non profit institutions, Dec. 13.

Non priority buyers, Dec. 16 and thereafter.

The second sale, covering aluminum sheet, strip, coil, rods, bars, and ingots in unused-good condition, has the following schedule:

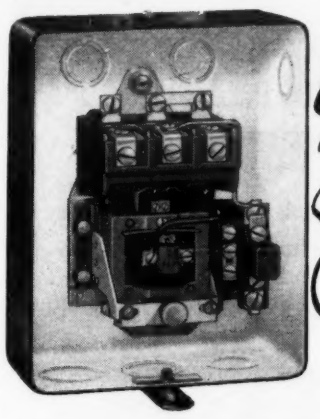
World War II veterans, Dec. 16 through 19.

RFC for Small Business, Dec. 20 and 23.

State and Local Governments, Dec. 24 and 26.

Non profit institutions, Dec. 27.

Non priority buyers, Dec. 30 and thereafter.



RUGGED and RELIABLE!

BULLETIN 709SP
Single Phase Across-the-Line Motor Starters

Do you need a single phase starter that can take it? The Bulletin 709SP solenoid starter is your answer. Its double break, silver alloy contacts never need cleaning or dressing. Its simple, efficient mechanism will hold in during line voltage fluctuations. A starter you can install and forget! Write today. Allen-Bradley Co., 1313 S. First St., Milwaukee 4, Wisconsin.

ALLEN-BRADLEY
QUALITY
MOTOR CONTROL

Ask Your Jobber for
HASCOBILT Parts
SUCTION and DISCHARGE VALVE, DISC, REEDS and SPRINGS
for Conventional and Hermetic Type Compressors
HASCO, INC.
GREENSBORO, N. C.
If your jobber can't supply you, send for illustrated catalog and price list.

WE'LL BUY YOU A SAMPLE

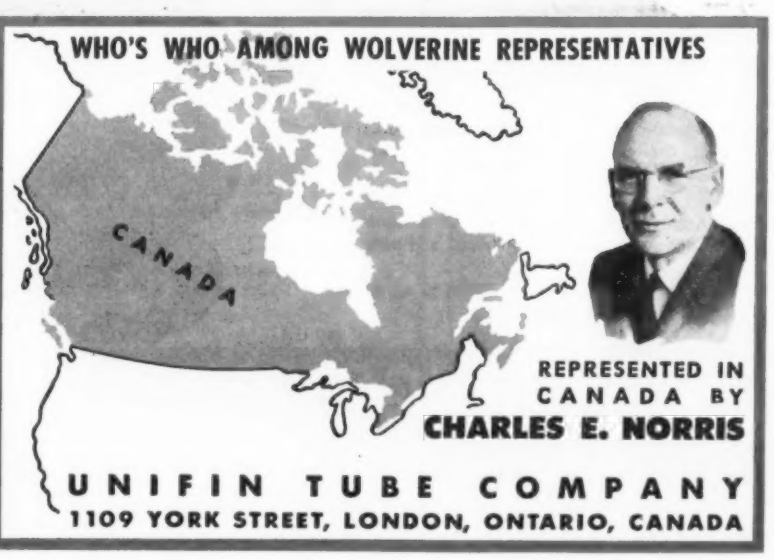
This is "on the house"! Our mill will go to the extra expense of cutting a quantity of short lengths from our regular run of Wolverine Trufin — and send a piece to you without charge or obligation — just so you can examine it and see for yourself how the fin is an integral part of the tube.

Examination will readily reveal why Trufin is so highly efficient, particularly wherever excessive vibration is encountered. And you will also realize how it can provide such long, dependable service, which, of course, means economy.

Trufin is available with high fins or low fins with varying fin spacings.

If you have a heat transfer problem, consider Trufin and the exceptional performance it will deliver for you.

We'll send you either of the samples pictured. Sample A to show you the high fins, or Sample B to show you the low fins.



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CALUMET & HECLA CONSOLIDATED COPPER COMPANY
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We Manufacture XL
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Ammonia Compressors 4x4 — 5x5 — 6x6
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ALSO
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Specify **CHICAGO**
SHAFT SEALS VALVE PLATES

With Self-Adjusting Sleevelock.

Only Chicago valve plates have replaceable seats.

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"ADVANCED" REFRIGERATION COMPRESSOR

"ADVANCED" Refrigeration Compressor, Model 100—1¾"x1½"—2 cyl., flywheel 10" diam., 2-groove "A" section—½ HP. *For use only with Freon refrigerant.*

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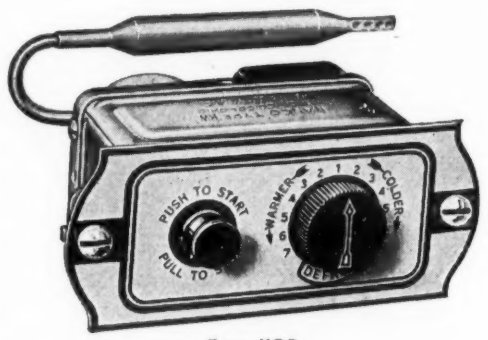

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Ranco Refrigeration Controls' handsome performance is enhanced by their handsome appearance. In Ranco Controls you get accurate, dependable refrigeration operation plus beauty of appearance.

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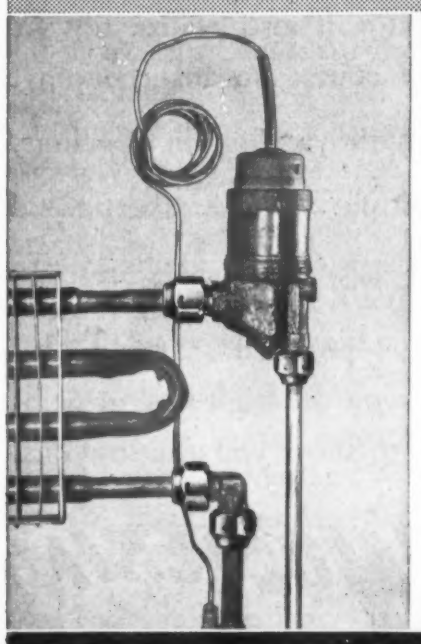
STA-TITE THE REFRIGERATION FLARE NUT *which cannot Creep or Work loose*



Moisture **will** work its way along the threads, to fill the space between the fitting and the inside of the flare nut. Confined in this space, the water, in its attempt to freeze during the operating cycle, develops a tremendous pressure —**16,400 p.s.i. at 20° F.** Something has to give at such high pressures . . . (1) the nut may stretch, (2) the male fitting may collapse, (3) the copper tube flare may extrude . . . any one of which will allow the flare nut to loosen. You know the rest—moisture in the system and/or loss of refrigerant. A condition which has long baffled the refrigeration industry.

NOW—Superior engineers have found a positive cure—the **new** "STA-TITE" Flare Nut. By simply providing relief openings in **otherwise standard flare nuts,** the possibility of pressure being created is entirely eliminated . . . **the flare nut stays tight!**

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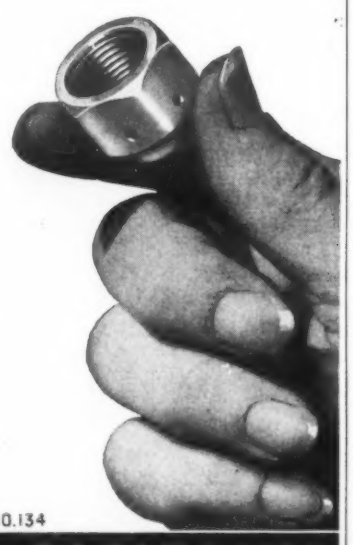
Get "STA-TITE" Flare Nuts from your jobber. Use them on **all** connections which are subject to frequent or occasional frosting and defrosting. Banish "creeping" and leaks forever!

"STA-TITE" is another Superor contribution to better refrigeration!

*U.S. Patent 2,323,099



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Refrigeration Problems
And Their Solution

By P. B. Reed

For Service and Installation Engineers

Manager, Refrigeration and Air Conditioning Division, Perfex Corp.

Separating Oil From Refrigerant (2)

AMMONIA AND SULPHUR DIOXIDE NON-MISCIBLE

Of the refrigerants that do not mix very readily with oil the two best known are the very popular and widely used ammonia and sulphur dioxide. Neither of these dissolve into oil to any appreciable degree (although, unlike the oil-miscible refrigerants, they are highly soluble in water).

If, as in a compressor, they and oil are agitated together, they mechanically mix with the oil, but as soon as they come to rest, with the compressor not in operation they tend to separate out into layers.

Liquid sulphur dioxide is heavier than oil so, at rest, the oil rises and forms a blanket on top of the liquid sulphur dioxide. This fact is taken advantage of in the standard low-side float, thousands of which have been used with sulphur dioxide.

During the off-cycle, the oil comes to the top of the body of liquid in the float shell and as liquid warms and the level rises, the oil drains off into the suction line through a small drain hole in the portion of the suction line protruding into the float shell. This separates most of the oil from the sulphur dioxide, but the suction line should slope back to the compressor to assure its return. (See articles published in the March 18 and 25, 1946 issues for a further discussion of the low-side float.)

Liquid ammonia is lighter than oil, so at rest, the oil tends to separate out of the ammonia and settle to the bottom. This may occur in the condenser, the liquid receiver, the evaporator, the accumulator, traps, or other places in the system where the oil and refrigerant may settle out. It is common in ammonia practice to put drain cocks at these low points and from them the operating engineer periodically draws off the accumulated oil, in the meantime having replaced it in the compressor so as to maintain a high enough oil level in the compressor to give normal lubrication and sealing of the pistons, valves, etc.

DESIRABLE TO FULLY SEPARATE OIL FROM REFRIGERANT

Several paragraphs back it was stated that it would be quite desirable to be able to *entirely separate* the oil and refrigerant just after they had left the compressor and to return the *oil only* back to the compressor crankcase.

The words "entirely separate" and "oil only" were emphasized for these factors are the "flies in the ointment"—the stumbling blocks to the completely successful separation of oil and refrigeration after they leave the compressor, by means of a device known as a "High-Side Oil Separator." It is so named because it operates in the high-pressure portion of the system rather than any method of separating the oil from the refrigerant in the low-pressure side of the system.

SEPARATION IN THE LOW-PRESSURE SIDE

Separation of oil from the oil-miscible refrigerants in the low-pressure side of the system is accomplished simply by allowing the refrigerant to vaporize out of the oil. This is a natural process in the evaporator and if there are no accumulators, float shells, manifolds, or other vessels in which oil may accumulate and from which it would have to be "lifted," and if velocities of refrigerant vapor are kept up reasonably high, say 1,000 ft. per minute at least, the movement of the vapor keeps the oil moving along through the suction line to the compressor. There the oil is permitted to drain into the crankcase and the refrigerant vapor passes on into the cylinders.

SEPARATION IN THE HIGH-PRESSURE SIDE

Separation of oil from the refrigerant in the high-pressure side of the system is not accomplished by evaporating the refrigerant and leaving the oil for it is necessary to keep the refrigerant in liquid form after it has condensed, for it is a a liquid that it must be supplied to the expansion valve.

When the refrigerant comes from the compressor discharge it is a hot, super-heated gas carrying with it a fine mist of oil. In that condition the oil is not dissolved into the refrigerant but is loosely carried along, and can be separated from the gas rather easily.

This is done by what is sometimes called "impingement," by which is meant the process of allowing the oil-laden gas to strike successive surfaces in a closed vessel. The oil tends to stay on these surfaces when it strikes them, while the gas is deflected, some of the oil being thus separated from the gas.

By leading the gas through a maze and in such manner than it turns corners, nearly all of the oil may be taken out and left on the "impingement" surfaces. The oil accumulates on the surfaces and drips off down into the lower part of the vessel. When its level rises to a maximum point it raises a float ball that opens a valve to a line leading back to the compressor crankcase.

The vapor in the vessel is at condenser pressure so that when the valve is opened, this high condenser pressure pushes the oil accumulated in the bottom of the vessel, out into the line and into the crankcase until the oil level drops enough to cause the float to close the valve. Thus it acts in the same manner as a high-side float.

Fig. 1

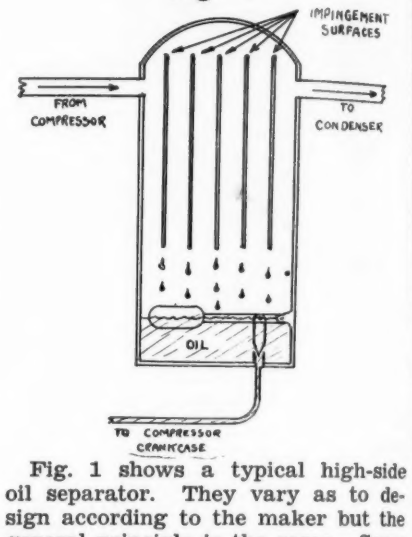

Fig. 1 shows a typical high-side oil separator. They vary as to design according to the maker but the general principle is the same. Some use baffles as the surfaces, others use metal wool or similar material, but all depend on the oil being rather loosely held by the gas and separating out and staying on the impingement surfaces, and then dripping off to the lower part of the vessel.

The more highly superheated (the hotter) the gas is the easier the oil will leave it for the more loosely it is held by the gas. If the gas is cool, that is, about saturation temperature, the oil is held more tightly and less of the oil will be taken from it by impingement on the plates or other obstructions in the oil separator.

If the gas is hot, over 95% of the oil may be separated from it. If the unit has just started and the condenser is cool and the gas only slightly superheated only a few per cent of the oil may be removed.

HOT GAS MAKES SEPARATION EASIER

Therefore the most successful and effective separation of oil by the high-side oil separator is when the discharge gas is hot. This usually occurs when the discharge pressure is high. The high-side oil separator is therefore not at its best on water-cooled installations especially if plenty of cold water is passing through, nor on installations that run on short-cycles, for in such cases the unit does not run long enough to develop much heat.

They work best on installations having high condensing temperatures and pressures, with highly superheated gas from the compressor. This is frequently true of low-temperature jobs in which the suction gas to the compressor is warmed up considerably, that is superheated.

(To Be Continued)

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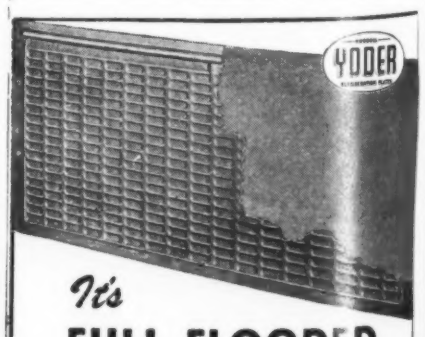

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Room Units Combined with Central System In New Plan for Multi-Room Conditioning

NEW YORK CITY — Claimed to offer all the advantages of both a central system and unit air conditioners, the new Trane Co. "Custom-Air" system of year-around air conditioning for multi-room installations was introduced by C. L. Ringquist at a dinner-meeting of consulting engineers held last week at the Commodore hotel here.

The Custom-Air system is made up, mainly, of two major pieces of equipment. A small motor-driven room unit is used to offset the sensible heat gains in the various spaces, and a central fan system supplies the ventilating and dehumidifying air to the spaces to be conditioned, said Mr. Ringquist.

The small, compact room units are attractively designed. They have rounded corners and are arranged so the entire front panel is removable. This permits access to the interior of the unit. Integral grilles and overall dimensions make it possible for the unit to fit under most standard windows, it is claimed.

Functions of Room Units

The coil in the room unit is of the standard tube and fin construction designed for heating with hot water and cooling with cold water. It can be furnished in four or six rows. Capacities for the two depths are included in the presentation which will be distributed.

The room units are built in two sizes, one unit having one fan and the other, two fans of the forward curved blade type. The fans are driven by a small fractional horsepower motor through an adjustable speed V-belt drive, which enables the installer or designer to set the speed to meet the air circulation requirements of the room. The use of a motor driven fan is the only method which has been found satisfactory for circulating the room air over the varying resistance of a filter and coil, according to Trane.

Two types of filters are available at present. The cleanable type and the replaceable type, both of which are 1 in. in thickness. The filter is accessible by removing the front panel of the unit.

These units are complete air conditioners from the standpoint of temperature, air circulation, and cleaning, and it is necessary only to put the required amount of cold or hot water through the coil in order to maintain the dry-bulb conditions in the room or space, explained Mr. Ringquist.

Purpose of Central System

The other requirements of complete air conditioning i.e. ventilation, dehumidifying, and humidifying are all taken care of by the central air unit of the Custom-Air system. Since the central air unit is isolated from the room unit, it can be operated independently to ventilate, humidify, or dehumidify the space.

The central air unit consists of some form of dehumidifier, either chemical or coils, sprays, a set of preheat and reheat coils, a heat exchanger, filters, and a fan for drawing in the outside air and discharging it to the spaces to be ventilated.

Operating in conjunction with the above equipment is the refrigerating plant which supplies chilled water to the dehumidifier coils and a mixture of chilled water and recirculated water to the room units. A Trane "turbo-vacuum" compressor, is recommended when chilled water is used in the system.

The chemical dehumidifiers and recooling coils or a direct expansion coil system with precool and reheat coils may be used with equally satisfactory results. However, when a direct expansion system is used on the dehumidifier coils, the compressors should operate constantly while the central fan is in operation during the cooling season, according to Trane. This prevents discharge of warm humid air to the duct system and gives closer control.

The distribution system or ductwork can be either high, low, or medium pressure depending upon the decision of the engineer and the space available in the building. This point is important, not only because no energy is required from the primary air to circulate the room air, but because of decreased cost of ductwork, it is emphasized.

Duct System Can Vary

It is possible to use whatever duct system might be preferable. The ventilating and dehumidifying air can be introduced into the room or space in any manner which in the opinion of the engineer will give the best results. Because this ventilating air is usually below the room temperature during the cooling season, it can be used to offset the heat gains in remote parts of particularly long rooms and spaces.

During the winter cycle, hot water is circulated through the coils in the room units. The quantity can be controlled by the room thermostats or by manual valves if desired. Ventilation air is introduced separately at or near room temperature. The sprays supply moisture in the proper amount to provide humidity in the conditioned spaces.

Change-over from winter to summer operation is entirely automatic, no adjustment being required, it is claimed.

During the summer cycle, chilled water is supplied to the coils in the room units, thus removing the sensible heat. The quantity of water is controlled by the action of the room thermostat. Ventilation air is introduced separately, at predetermined minimum temperature and low moisture content to take care of ventilation and dehumidifying requirements.

Between seasons and on rising outdoor temperature, the temperature of the water in the room units is gradually reduced. The temperature of the ventilating air remains constant until the outdoor air temperature reaches 75°. When the outdoor temperatures reach 75°, the ventilation air temperature is reduced to 60°.

The water in the coils of the room units is still warm enough, however, to provide heat if necessary. On further increase in outside air temperatures, the water to the coils in the room units is gradually chilled until full capacity for cooling is available. On falling outside air temperatures the cycle is merely reversed.

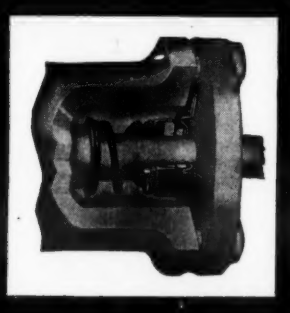
Summer-Winter Operation

During the two cycles, the fans on the room units are operating continuously. They draw the room air into the units through the filter, over the coil, heating or cooling it as the case may be and discharge it through the outlet grilles.

In summer the precool and reheat coils of the ventilation air system operate in a run-around cycle. In so doing, they take heat from the incoming outside air and transfer it to the cold dehumidified air leaving the dehumidifier coils for reheat purposes.

In the winter cycle, the precool and reheat coils operate as preheat and reheat coils. The sprays are in operation at all times to provide the required humidity.

In the "between-seasons" period, only the reheat coil is in operation to provide the correct discharge temperature for ventilating air.



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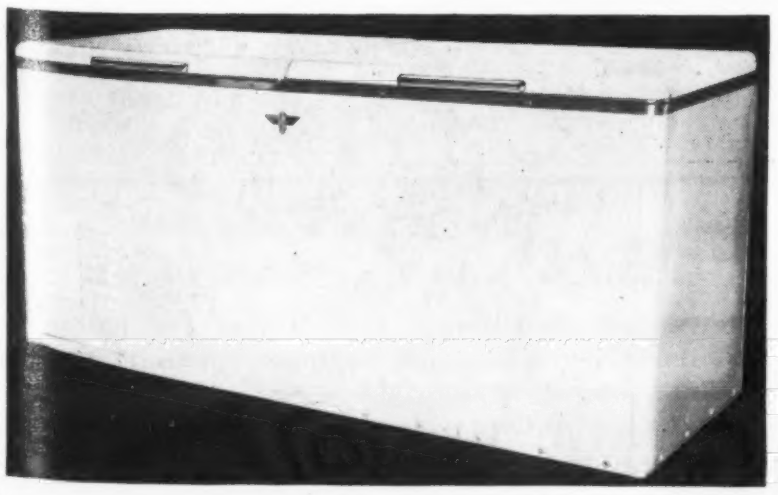

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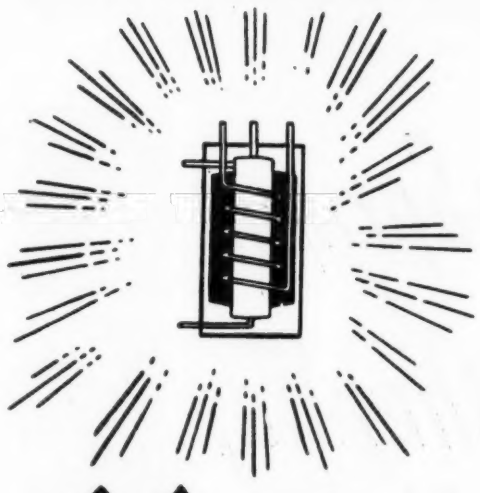

defrosting

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Send for Booklet 16-N explaining Thermobank System and including useful low temperature information and time-saving rapid selection tables.

14

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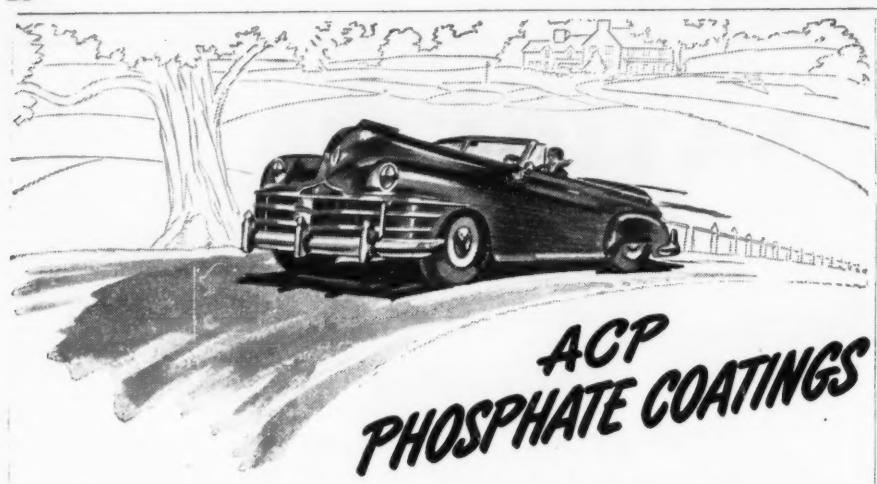

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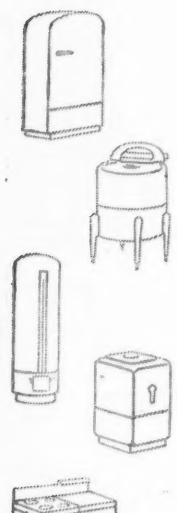

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WANTED—NEW or used pressure type oil burners, any standard brands. State price, condition, make. Address HEDGES, ELECTRIC, Hillsboro, Ohio. Phone 152.

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FREEZER ALARMS available for immediate shipment. Alarm set for 15 degrees above zero. Manufactured by Electric Glass, same as advertised July 22 issue Refrigeration News, page 8. Price $17 net each. REESE & LONG REFRIGERATION PRODUCTS, INC., 367 First Ave., New York 10, N. Y.

COMPRESSOR AND PARTS rebuilding—Compressor, float valves, water valves, low pressure controls, evaporators, water cooled condensers, condensing units and many other items replaced from our large stocks, or repaired upon receipt of your defective material. Send for our catalog-prices listed. REFRIGERATION MAINTENANCE CORP., 321 E. Grand Ave., Chicago, Ill.

SEALED CROSLEY TERMINALS. Installed from the outside in a few minutes without opening the compressor. Corrects leaky terminals on all Crosley "F-12" units. Set of three $6.75 (Part No. 1020). Installation tool $1.65. Immediate delivery. Money-back guarantee. SEALED UNIT PARTS CO., 3097 Third Ave., New York 56. N. Y.

FRIGIDAIRE METER-MISER Terminals. Installed from the inside. Fits compressors with bottom-mounted terminals. (Part No. 1060.) Set of three $2.85. WESTINGHOUSE TERMINALS. Installed from the inside. (Part No. 1030.) Set of three $2.85. SEALED UNIT PARTS CO., 3097 Third Ave., New York 56, N. Y.

NORGE CHECK VALVES. For open-type units. (Part No. 1040.) $2.55 each. SEALED NORGE terminal, packing washers. For repairing leaky terminals. Installed from the outside in a few minutes. (Part No. 1050.) Three sets (9 washers) $1.00. SEALED UNIT PARTS CO., 3097 Third Ave., New York 56, N. Y.

SEALED NORGE terminals. Complete assembly. Replaces shorted terminals. Installed from inside. (Part No. 1100.) Set of three $2.85. Sealed Crosley terminals. Installed from inside. Part No. 1070 for SO2 models. Part No. 1080 for "F-12" models. Part No .1090 for "F-21" models. Set of three $2.85. SEALED UNIT PARTS CO., 3097 Third Ave., New York 56, N. Y.

AIRACOUSTIC SHEETS: 10,000 sheets. Johns-Manville Airacoustic sheets. 24 in. x 36 in. x ½ in. for sound absorption for air conditioning systems. Noncombustible. Waterproof. Inorganic. Packed in original cartons. SYRACUSE SURPLUS CO., INC., 107 W. Hiawatha Blvd., Syracuse 8, N. Y. Telephone 3-0151.

SECTIONAL WALK-IN coolers made of plastic plywood 4 in. and 6 in. of Fiberglas insulation. 8 ft. x 8 ft. x 7 ft. high. Write for prices and literature. ZERO REFRIGERATION CO., Saukville, Wis.

NEW 3-hp. compressors, air and water; 5-hp. water cooled compressors—all with 3 phase motors; also have new air compressors for beer systems. BOX 2152, Air Conditioning & Refrigeration News.

FRANCHISES AVAILABLE

NYC MANUFACTURER has exclusive territory available for several select dealers who are capable of representing a quality line of sliding glass top display cabinets. Complete compressor and motor. Immediate shipments! FLEISCHMAN FREEZER CO., 275 East 140th St., Bronx 51, N. Y.

A FEW desirable territories available to responsible distributors for new thermostatic expansion valve on which prompt deliveries now can be made. National advertising will back your selling effort. Other selling aids available. Write at once to BOX 2154, Air Conditioning & Refrigeration News.

FRANCHISES WANTED

MANUFACTURERS OPPORTUNITY. A major refrigeration service with the largest display rooms in New York City, 30 foot window and 5,000 cu. ft. showroom space in automobile section desires connection with volume supplier of self-contained refrigeration, household units—freezing units—confidential. BOX 2155, Air Conditioning & Refrigeration News.

AVAILABLE FOR DELIVERY:

1/3-1/2-3/4 *Condensing Units Priced Right on Large Quantity Sales*

Box 2150, Air Conditioning & Refrigeration News

Pulleys, Flywheels

V-Groove Pulleys, 1 and 2 grooves, from 2" to 7"

Flywheels up to 18", spoke and fan type

These pulleys made from best quality grey iron

Write for Quotations

PRESTON - SANFORD
Incorporated
6630 East Canfield Ave.
Detroit 7, Michigan

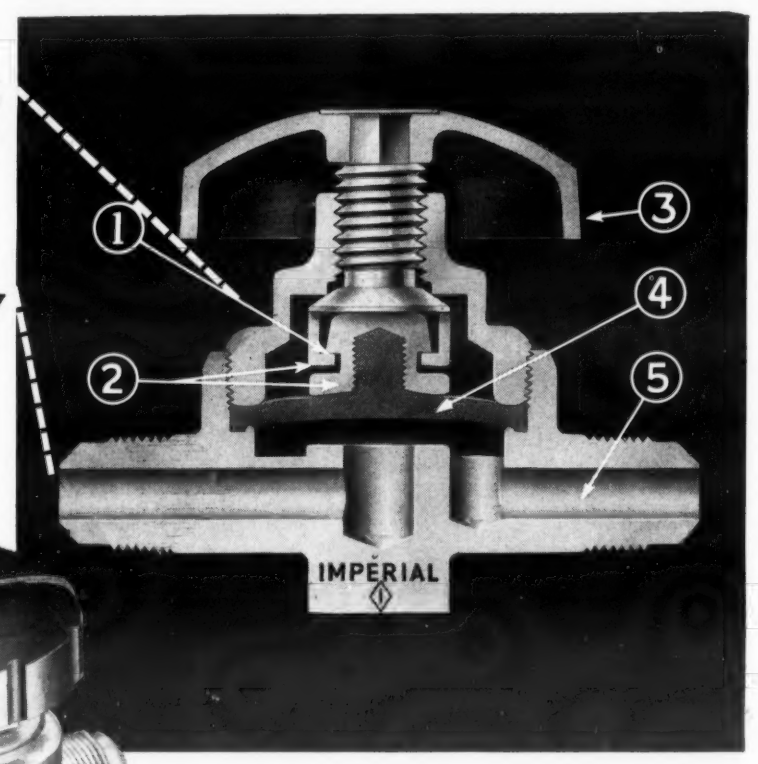
WANTED

FIELD SALES MANAGER

to contact distributors and dealers for national commercial refrigeration equipment manufacturer. Good proposition for right man. State references, complete experience, age and include photograph with letter.

BOX 2156
AIR CONDITIONING & REFRIGERATION NEWS

No Springs ★ *Either-Way Flow* *.



. . . Because direct lift provides positive control

• Built along entirely new principles, the Imperial DiaSeal Valve has a sturdy, "million cycle" diaphragm that is operated by positive mechanical action in both opening and closing the valve. *No springs are used.*

Features that make the DiaSeal the outstanding valve for refrigeration service are readily apparent in the sectional view:

1. **NO SPRINGS**—DiaSeal Valve cannot "stick shut" because diaphragm is lifted mechanically. Positive control with flow in either direction.
2. **ONLY TWO MOVING PARTS**—Simple construction assures greater dependability.
3. **EASY FINGER-TIP ACTION**—Quick, sure opening and closing with less than two turns of handle.
4. **LONG LIFE DIAPHRAGM** is impervious to all common refrigerants. In actual tests, has withstood over 1,000,000 openings and closings under refrigerant pressure.
5. **INLET AND OUTLET PORTS IN LINE.** Simplifies installation.

Furnished in 2-way and angle types, with either flare or solder connections. The Imperial Triple Seal Groove is an added feature on flare connections ⅜" and larger.

Both internal parts of the DiaSeal lift out with the bonnet, facilitating soldering in line. Extremely low height cuts installation space.

Ask for Bulletin 103-REF

See Your Jobber

THE IMPERIAL BRASS MFG. CO., 565 S. Racine Ave., Chicago 7, Ill.

IMPERIAL

FITTINGS • VALVES • FILTERS • FLOATS
DEHYDRATORS • CHARGING LINES • TOOLS
FOR CUTTING, FLARING, BENDING, PINCH-OFF AND SWEDGING.

Display Big Enough for All-Around Dealer

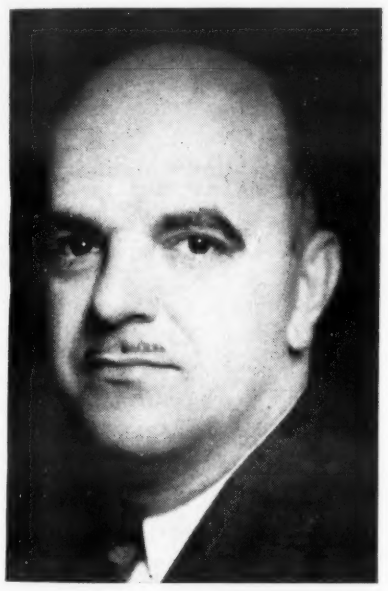
Although the NEWS does not customarily use pictures of store fronts, this one showing a New Orleans distributor-dealer who handles commercial refrigeration equipment as well as appliances is unusual enough to merit notice. Large windows permit display of refrigerated fixtures.

* * *

Vogel Assumes Added Responsibilities In New Appointments at Gemco

ST. LOUIS — Willard R. Vogel, vice president of General Engineering & Mfg. Co. here, has been appointed general manager, it was announced last week by J. R. Schrieber, president of the company. Mr. Vogel now takes over many duties formerly supervised by President Schrieber himself.

Another advancement in the company is that of Arthur H. Huhn who becomes manager of the air conditioning and research department. Mr. Huhn was responsible for much of the work in developing the company's new product, the Gemco



WILLARD R. VOGEL

* * *

"Packaged" Air-Conditioner, now manufactured at the Oleatha Avenue plant in St. Louis.

Frank A. Wagenfuehr joins the Gemco organization as comptroller in one of the recent additions of the company's staff. Mr. Wagenfuehr has been comptroller at the Farm Credit Administration and Federal Land Bank of St. Louis, with which he was associated for 13 years.

Gemco has developed an air conditioner with a 2-stage compressor for offices, stores, shops, and homes and plans to start volume production of this equipment Jan. 2.

Radford Appliance Mart Moves Into New Building

NEW ORLEANS—Radford Appliance Mart, owned and actively managed by Oliver L. Radford, recently opened the doors of its new and strikingly attractive building in a shopping center here.

Located at 4137 Washington Ave., in the Broadmoor Shopping Center, the Mart has a frontage of 145 ft. on this much-traveled thoroughfare. Specially built as an appliance mart, Radford's has thousands of square feet of sales floor display space, easily viewed through seven large 9 x 12 windows. The use of Cold Cathoid Tubing, a new development in lighting, contrasts beautifully with the red tile floor and gives an appealing setting to the products displayed.

Radford Appliance Mart, formerly the Radford Appliance & Supply Co., has been active in the refrigeration and appliance field for the past 14 years. Though primarily interested in retail sales, Radford's is also the distributor for name-brand merchandise. Serving the needs of large users of commercial refrigeration has created for Radford's growing volume of sales in this field.

Flying Frozen Foods to Alaskans Is No Joke

LOS ANGELES—Bringing frozen foods to the Alaskans is not a new twist on an old joke—for 10 tons of fresh produce and frozen foods are flown from here weekly to Anchorage, Alaska.

While the produce is being distributed by train, plane, truck, boat, and sled, the American Airlines' planes reload with Alaskan seafood—crab, shrimp, halibut, and clams for southern California.

The operation is run cooperatively by L. V. Castner, Inc., Alaskan food distributor; Consolidated Produce Co., Ltd., wholesale California produce dealer; and the B. C. Whelan Co., western food broker.

The flights are said to be the first regular weekly air shipments of food between the United States and Alaska, and the first time that Alaska has been regularly provided with a year-around supply of fresh produce and frozen foods.

Freezer-Selling Technique Keeps Customers Happy

SHOREWOOD, Wis. — Earl H. Waterman, president of Miller-Waterman Electronics Corp. here, knows how to keep in his customer's good graces.

For example, customers who signed up for freezer units were invited to keep their food (a reasonable amount, of course) in store freezers until their units arrived, when they got their food back with their purchase. Also, he sometimes gives over part of his store to ladies' clubs for card games and runs motion pictures provided by appliance manufacturers.

Frozen Food Market Tests Conducted In East, Midwest

NEW YORK CITY—Market testing of frozen fruits, vegetables, and pies have been conducted by two firms in the East and Midwest recently.

Libby, McNeill, & Libby of Chicago is still testing the frozen fruits and vegetables in Milwaukee, while the roadside restaurant firm, Howard Johnson Co. of Wollaston, Mass., has completed tests on frozen pies in its own outlets.

The Johnson company has also laboratory tested frozen clam chowder, scallops, fried clams, and French fried potatoes for over a year.

The Johnson firm is said to be planning to market its frozen foods extensively in the near future.

EXCLUSIVE -
BTC EVAPORATOR PLATES
Feature Trouble-Free Operation

The exclusive features of BTC Evaporator Plates provide trouble-free, dependable operation. Exact engineering and quality manufacturing plus the basic, "Cross Flow" gridiron design, produce results not possible with ordinary evaporator plates:

Full-Flooded Principle — The BTC "Cross Flow" pattern provides multiple paths for refrigerant flow permitting uniform wetting of the entire plate, and unrestricted operation of the full-flooded principle . . . essential for good refrigeration.

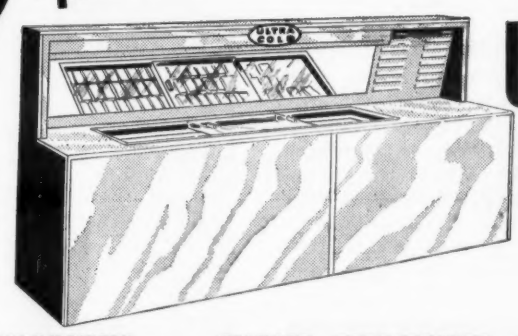
Sturdy Construction — BTC Evaporator Plates, embodying all the best manufacturing standards, are made of heavy, gridiron embossed steel, 16-gauge; all electrically welded with metalized zinc spray on sand-blasted surface; dehydrated, moisture-vapor free and scrupulously clean.

Lowest Operating Cost—BTC Evaporator Plates, correctly engineered and quality manufactured, assure low pressure drop and constant, uniform heat transfer with resulting lowest operating cost.

BTC Evaporator Plates are engineered and manufactured for trouble-free operation. Write Brewer-Titchener for data on BTC Evaporator Plates to meet whatever commercial or technical refrigeration application you may have.

THE BREWER-TITCHENER CORPORATION
CRANDAL-STONE DIVISION --- BINGHAMTON, N. Y.

handle this proven, fast selling FREEZER!



ULTRA COLD

- Full-vision Lucite Tops
- Triple Insulation
- Fluorescent Lighting
- Display Mirror
- Durametal Construction

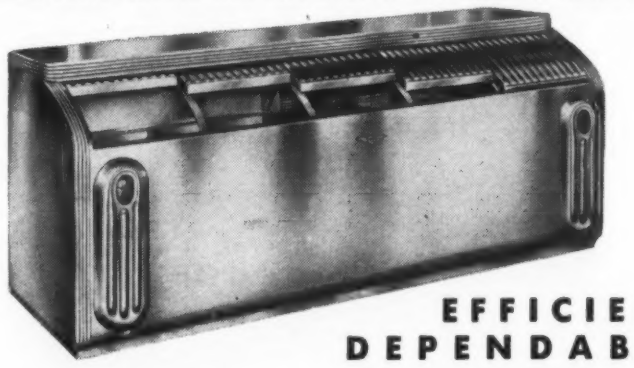
24 Models to Choose from
A design for every customer

MAXIMUM TRADE DISCOUNTS . . . CHOICE TERRITORIES STILL OPEN
IMMEDIATE DELIVERY

WRITE FOR INFORMATION AND PRICES

CARL-CRAFT COMPANY
Refrigeration Division
4113 West Jefferson Blvd., Los Angeles 16, Calif.

BEST SELLER
BUXTON CHILL-AIRE Dry Beverage Cooler



EFFICIENT
DEPENDABLE

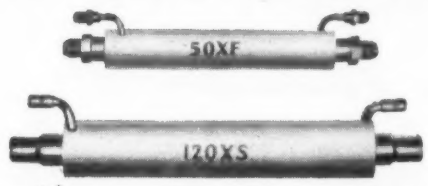
Self Contained and Remote Types

Some Territories Still Open for DISTRIBUTORS and DEALERS

MANUFACTURED BY
BUXTON INC.
1960 E. 48th Street
LOS ANGELES 11, CALIF.

MINIMUM PRESSURE DROP *with* HEAT-X CAST ALUMINUM HEAT EXCHANGERS

MORE BTU's PER WATT *with* HEAT-X CAST ALUMINUM LIQUID COOLERS



Shown are two models of Heat Exchangers—various sizes available. Both liquid and suction are copper tube. Ideal for use as water cooled capacity boosters on air cooled units. No internal joints—no by-pass.

Here is one of Heat-X Coolers you can select from a range of sizes.

No freeze-up damage and no short cycling are two outstanding features. These Coolers combine top performance and low cost.

WRITE AT ONCE FOR HEAT-X ENGINEERING SPECIFICATIONS AND CAPACITY TABLES

Orders Promptly Shipped

THE HEAT-X-CHANGER CO., INC.
415 Lexington Avenue, New York 17, N. Y. Brewster, New York

Heating & Ventilating Exposition--

(Concluded from Page 1, Column 2)

and modulate indoor climate in places of residence, business, and industry, and includes atmospheric control in industry as related to safety and to the conditioning of materials."

Among the air conditioning exhibits will be a broad range of packaged units, central systems, multiple-unit systems with individual regulation for multiple-apartment buildings, and industrial air conditioning systems.

One exhibitor will show a year-around automatic conditioning system for railroad cars regulated by electronic controls said to be sensitive to one-tenth of a degree temperature change. It is so designed that more heat can be supplied to the windward side of the train, if necessary.

Besides air conditioning equipment, displays will feature all types of furnaces and heating systems, blowers, pumps, piping, and valves, automatic controls, instruments, accessories, and raw materials. Several exhibitors are planning displays of various forms of radiant or panel heating.

The show will open Monday, Jan. 27, at 2 p.m., closing at 10 p.m. Show hours on Tuesday, Wednesday, and Thursday will be from 10 a.m. to 10 p.m., and on Friday, from 10 a.m. to 6 p.m.

Admission to the exposition will be limited to those holding tickets of invitation issued by exhibitors, or those who can qualify as having a "constructive interest" in the show. The general public will not be admitted. All visitors will have to register at Lakeside Hall even though they carry tickets of invitation.

Dedication of its new research laboratory in Cleveland, a forum on panel and radiant heating, and a joint session with the National Warm Air Heating and Air Conditioning Association are highlights of the program for the fifty-third meeting of the A.S.H.V.E. which includes 11 technical papers to be presented at four technical sessions.

Opening session is planned for Monday morning, Jan. 27 at the research laboratory. Following dedication ceremonies, reports of officers and committees will be heard. A luncheon is scheduled for Monday noon, and an informal party and entertainment are planned for Monday evening.

Technical papers will be presented Tuesday morning, while the panel and radiant heating forum, featuring two technical papers, will follow in the afternoon. Three papers will be presented Wednesday morning, and on Wednesday evening the annual banquet will be held. Thursday morning will see another technical session, followed by the afternoon session with the National Warm Air Heating and Air Conditioning Association.

Twelve talks covering both sales promotional and technical aspects of air conditioning and heating will mark the two-day session of the Warm Air group, which will open at 10 a.m. Wednesday, Jan. 29, in the Hotel Cleveland.

Special emphasis will be given to dealer promotional aids, and a streamlined version of the Indoor Comfort Conferences now scheduled for dealer training in major cities during 1947 will be presented during the convention. This presentation will include two new sound slide films developed for the association by Florez, Inc.

Two discussions on labor are scheduled, one by H. J. Post of the National Association of Foremen; the other by Allen W. Rucker, president of the Tool Owners Union.

Guiding the overall policies and program of the exposition is an advisory committee comprising representatives of the A.S.H.V.E. and allied groups. Alfred J. Offner, president of A.S.H.V.E., is chairman, and B. M. Woods, first vice president of the society, vice chairman. Other A.S.H.V.E. representatives include L. P. Saunders, Herman Seelbach, Jr., H. R. Allonier, A. W. Edwards, and F. R. Bishop.

Representing other associations are Stewart E. Lauer, president, Air Conditioning & Refrigerating Machinery Association; R. H. Hargrove, American Gas Association; A. G. Syska, American Institute of Consulting Engineers; J. R. Edmunds, Jr., American Institute of Architects; C. S. Leopold, American Society of Refrigerating Engineers; J. M. Frank, Industrial Unit Heater Association.

Ernest Szekely, National Association of Fan Manufacturers; E. I. Williams, National Mineral Wool Association; F. E. Mehrings, National Warm Air Heating and Air Conditioning Association; W. A. Matheson, Oil-Heat Institute of America; Marc A. Bluth, Stoker Manufacturers Association; W. R. Stockwell, Institute of Boiler and Radiator Manufacturers; R. M. Getschow, Heating, Piping and Air Conditioning Contractors National Association.

Also on the committee are L. T. Avery and John Paul Jones.

Embargo Hits Industry--

(Concluded from Page 1, Column 5)

turers who depend upon us for parts. One West Coast manufacturer authorized us to ship him parts by air freight, if we couldn't get them to him any other way.

"As far as our supply of material is concerned, we are in pretty fair shape, and we believe we could get what we need by truck shipment. Of course if the strike continues, we will be forced to close."

The list of items exempt from the provisions of the freight embargo, which includes both ice and dry ice, did not include refrigeration equipment. The exemptions did specify "all ingredients used in preparation of food and feed when consigned to manufacturers, processors, or packers."

BUSH UNITS, ON PERFORMANCE RECORDS
ARE THE MOST ECONOMICAL
WATER DEFROST UNIT COOLER
SLOTTED HANGERS
Permit greater ease of installation. Slip under lag bolts while other end is fastened.
DEEP PLENUM CHAMBER
Designed to give maximum distribution of moving air through core.
DEFROSTS WITH TAP WATER.
Less than five minutes needed for complete defrosting.
MOTOR SUPPORT
Light — yet strong and vibration proof. Assures smooth, quiet operation.
Bush
HEAT TRANSFER PRODUCTS
BUSH Units, on their performance record, are the most economical . . . dollar for dollar . . . that can be specified. These units are constructed sturdily with materials of highest quality to stand hard usage beyond the exacting demands of any refrigeration system. BUSH Units stand the test of time with an enviable record of dependable and trouble-free performance.
BUSH
HEAT TRANSFER PRODUCTS
Address BUSH MANUFACTURING COMPANY, Hartford, Conn.
415 Lexington Avenue, New York, N. Y. • 549 W. Washington Boulevard, Chicago, Illinois. • Export Address: 13 East 40th Street, New York, N. Y. • Cable "ARLAB"
Standard Unit Cooler
Water Defrost Unit Cooler
Ceiling Mounted Unit Cooler
Wall Mounted Unit Cooler
Condenser
Plenti-Coil

PURO ELECTRIC WATER COOLERS
BRANCHES IN PRINCIPAL CITIES
MAIN OFFICE
440 LAFAYETTE ST.
New York 3, N. Y.
PURO FILTER CORP. OF AMERICA
DRINKING WATER SPECIALISTS FOR 40 YEARS.

AIR CONDITIONING condensers and coolers designed and built FAST
We design, build, retube or rebuild quickly any unit with tubes, standard or special, for Freon, ammonia, CO2 Materials on hand for prompt delivery Emergency maintenance work 24 hours a day, anywhere.
Condenser Service & Engineering Co., Inc.
88 River Street, Hoboken, N. J.
Phone HOboken 3-4425. After 6 P. M. or Sundays, HOboken 3-4428

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